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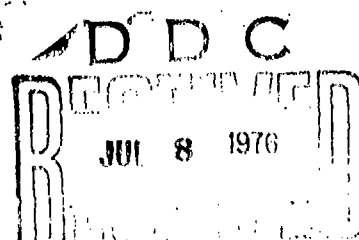
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TAEAG REPORT
NO. 34

NAVY RECRUIT TRAINING OPTIMIZATION, POST 1980
PHASE I: CURRENT ASSESSMENT AND CONCEPT
FOR THE FUTURE



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MAY 1976

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This report provides a curriculum design for optimizing the Navy Recruit Training program to meet the operational Fleet needs during the post 1980's. It is based upon analyses of current training (late 1975), published future Navy operational requirements and demographics related to the typical recruit profile of the 1980 decade.

The curriculum design recommends a systems approach to indoctrination training for newly enlisted personnel to produce an initially qualified seaman. The resulting curriculum will be responsive to evolving Fleet requirements and a changing recruit profile. A quality student product is first consideration followed closely by the most efficient training system that will achieve that product.

Phase II will identify curriculum areas, prioritize these in order of their importance to be taught, determine the optimal time frame for teaching the selected subject matter and provide alternate curricula based on time and dollar constraints. Phase III will be devoted to finalizing the selected curriculum and developing evaluation criteria to support that curriculum.

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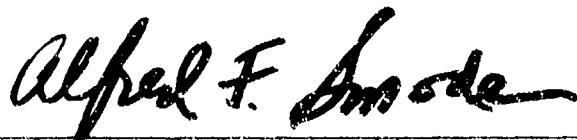
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May 1976

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FOREWORD

This study was prepared in response to a task assigned by the Chief of Naval Education and Training to provide information, observations, conclusions, and recommendations which could be used in making decisions and taking actions regarding Navy Recruit Training. Approval and distribution of this report acknowledges that the study meets the objectives of the task statement. Action on, or related to, the conclusions and recommendations will be taken separately and in conformance with, and adherence to, the policy and procedures of the Chief of Naval Education and Training.

The TAEG extends appreciation to AVCM D. M. Harris, Master Chief Petty Officer of the Force for the Chief of Naval Education and Training (CNET), and BMC F. J. Czajkowski, 1975 Shore Based Sailor of the Year, for their interest and generous assistance during the development of this document. Appreciation is also extended to the many people at various levels within the Navy and the sister services who gave generously of their time to discuss their present training programs and projected future requirements.

SECTION I

INTRODUCTION

The Department of Defense (DoD) conducts an organized system of in-service training which begins with recruit training and continues throughout the individual's enlistment term. Recruit training is the largest single-purpose training program within the DoD involving more than 450,000 trainees each year, accounting for approximately 18 percent of the total military training budget. The Navy recruit training program is likewise the largest single-purpose training system within the Navy with about 20,000 recruits in training at any one time, representing approximately 13.5 percent of the total Navy training budget.

Recruit training requires continued management attention due to its importance as initial indoctrination to the Navy environment. Because of the magnitude of the training program in terms of resources required, it also is highly visible to DoD and Congress.¹ In order to maintain training currency and efficiency of operation, the program must be reviewed periodically to ensure that resources are being utilized to the best advantage in terms of providing a qualified recruit to the Fleet.

PURPOSE OF THE STUDY

The purpose of the ongoing TAEG Recruit Training Optimization project is to develop a design for optimizing the recruit training program to meet the needs of the Navy during the 1980's. At issue is how to most efficiently provide the Fleet with a qualified recruit graduate while minimizing the training resources required.

SCOPE

The primary emphasis of this effort is placed upon providing a recruit training curriculum which will meet the operational needs of the Navy post-1980. To achieve this, the study team had to (1) examine the current status of recruit training as conducted at the three RTCs located in San Diego, California; Great Lakes, Illinois; and Orlando, Florida, (2) envisage projected operational requirements for the 1980's, and (3) propose training design changes needed to meet future requirements. Specific analyses address current training, external influences on training, personal characteristics of entering recruits, curriculum content, and management practices which impact on the future Navy mission and the concomitant training requirements. Since recruit training is part of a

¹ The Military Manpower Training Report (Title 10, USC, 138(d)(2)) requires that both Congress and DoD be provided data on the costs, training time, and number of personnel involved in the recruit training system.

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training continuum, it cannot be examined as an isolated entity. Therefore, the interactions of recruiting, training, and job functions are addressed. Although certain aspects of management are addressed, it was not the intent of the TAEG to examine the management structure or the administration of the program except as they affect the successful conduct of training to achieve training objectives.

The overall TAEG study is being conducted in three phases. Phase I, the results of which are reported here, examined the current training program, identified future training requirements, and critically noted any differences between current training and anticipated Fleet needs. A plan is provided for the optimization of training to meet future requirements of the Navy operational environment.

Phase II will determine curriculum content areas, prioritize these in order of importance to be taught, determine the optimal time required for training, and delineate tradeoffs as a function of time and dollar constraints. Alternate curricula, constrained by variations in training time, will be provided for examination and approval. Phase III will finalize the project to include the approved curriculum(a) and recommended training strategies, support materiel, and specifications for the evaluation of training.

APPROACH

A rational subjective, analytic approach was utilized in this study. Figure 1 provides a diagram of the procedure used in accomplishing the Phase I development. The specific techniques utilized included participation, observation, structured interviews, card sort, and a literature review, which are described below.

The recruit was observed in his environment during recruit training and at the follow-on "A" school and operational levels. At the recruit training level, the project team followed the progress of the recruit from inprocessing through graduation. The conduct of training in the classrooms, barracks area, and drill and physical training areas was observed and discussed in considerable detail with subject-matter experts. Information was also elicited from recruits during training breaks and from instructors and training support and management personnel.

The study team attended the six week Company Commander's School at RTC Orlando. The team members acted as participants and as observers (on a noninterference basis) and discussed the conduct of training with the training staff. The team also observed Company Commanders (CCs) in the job setting. Overall, more than 12 man-months, over a period of 15 weeks, were spent by TAEG observing a complete recruit training cycle,

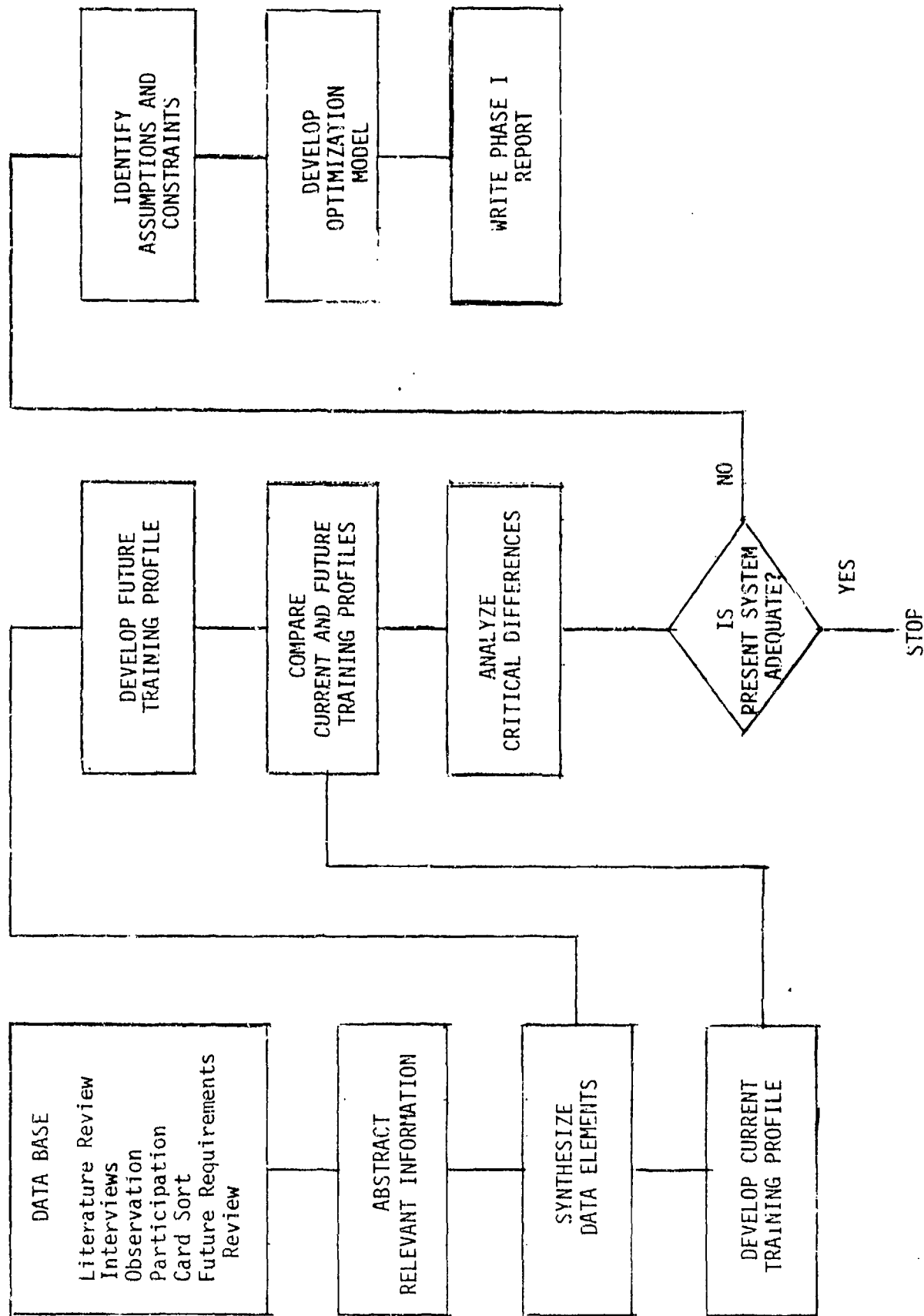


Figure 1. Project Development, Phase I

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its management, administration, and logistics support at RTC Orlando. Concomitantly, visits were made to RTC Great Lakes and RTC San Diego to observe and discuss training for the purpose of comparing the programs of the three RTCs.

At the "A" school and operational levels, TAEG interviewed recruit graduates and their superiors. Information was elicited on job satisfaction, perceived adequacy of the present training system to meet Fleet needs and on specific subjects such as military conduct, use of the chain-of-command, wear and care of the uniform, adequacy of uniforms upon arrival at duty station, knowledge of Navy customs and terminology, ability to respond to emergency situations, cooperation, initiative, responsibility, and other topics related to fundamental shipboard functions. In the interviews, the performance of personnel directly assigned to the Fleet upon completion of apprentice training was compared with those who had attended "A" school prior to assignment. The interviews also addressed the present and proposed job utilization of women.

In addition to the structured interviews, a card sort technique was employed. A dozen supervisors received a packet of 75 cards with each card containing a statement on a specific curriculum topic; e.g., customs and courtesies, fire fighting, safety, first aid, personal hygiene, and rules and regulations. Supervisors were asked to sort the cards by ranking the statements in order of importance to successful job performance and shipboard living.

Recruit training in the other military services was observed and the selection, training, and duties of the training personnel were examined in detail. In addition, persons in the civilian industrial, scientific, and educational communities were queried regarding the possible impact of future events on the training of recruits.

In addition to participation, observation, and interviews at many levels of military and civilian organizations, a thorough review of the literature was accomplished. Publications pertaining to the military, political, social, and economic milieu of the 1980's were reviewed to determine the influence of possible future events on the training of recruits. The current Navy recruit curriculum and supporting course and reference materials were examined in detail as were those of other United States and foreign military services.

From the sources described above, the information considered most relevant to Navy recruit training was abstracted and synthesized to provide a basis for comparison of current Navy recruit training with the data on future requirements. The current and future training profiles compiled from the data were analyzed and the differences judged by the

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TAEg for criticality.² This data was then used as a basis for the development of an optimization plan which would match future recruit training to operational needs.

ORGANIZATION OF THE REPORT

In addition to this introduction, three other sections are provided. Section II addresses the current Navy recruit training system. The interactions of activities within the initial enlistment and training pattern are discussed, followed by observations on certain aspects of the management of recruit training. Also discussed are a number of selected curriculum topics wherein key issues are flagged and recommendations for improvement offered.

Section III examines in detail the key issues from the vantage of the future. The influence of factors external to the immediate conduct of training and the personal characteristics of the future recruit are discussed with regard to their probable impact on management techniques, training goals and philosophy, and the conduct of training.

Section IV presents a proposal for the redesign of recruit training. A prioritization scheme for determining curriculum content is proposed. Functional and adaptive training strategies are also outlined to make the curriculum more relevant and to accommodate individual differences. Guidelines are provided for determining the optimal length of the training period.

In addition, two appendixes are provided. Appendix A lists the personnel and organizations contacted during Phase I of the study. Appendix B discusses the expected impact of public supported vocational-technical (VOTEC) institutions as a competing agency for the future Navy enlistee pool.

² While the procedure was subjective in nature, it provides a practical method for analyzing a mass of data, including data which can be utilized to predict probable future events.

SECTION II

CURRENT NAVY RECRUIT TRAINING SYSTEM

This section provides a composite view of the Navy recruit training system as it exists across the three RTCs. To better provide understanding of the function of recruit training, certain issues are addressed which impact on the total recruit training system and suggestions for modifications are offered. The discussion begins with the initial enlistment pattern. From this base point the interface of recruit training with recruiting, apprentice training, technical training, and the Fleet is addressed. The characteristics of today's recruit are described, followed by observations on certain aspects of management concerning goals, standardization of training, the curriculum, training evaluation, and the length of training. Selected areas of training support are addressed to include personnel, administration, facilities, and training materiel. Finally, a number of selected topics from the current curriculum are discussed in some detail. During the course of the discussion in this section, key issues are flagged and recommendations for changes are suggested.

NAVY PERSONNEL MANNING AND TRAINING

Recruit training cannot be viewed in isolation because it is a component of the pipeline relating to the total Navy manning and training system. Figure 2 on the next page presents a schematic of the initial enlistment and training pattern of Navy enlisted personnel. All activities exist for one purpose; i.e., to provide trained manpower to the operational forces. The dropout or delay of personnel within any one of the components can attenuate Fleet readiness.

INTERACTION OF COMPONENTS. The acquisition of skills and knowledge by recruits is to some extent dependent upon the recruit's expectations of what the Navy environment is like. For the most part, this expectation is formed during the recruiting process. The person seeking information prior to enlisting should be presented the facts as they exist. Complete honesty must be exercised at this critical career decision point to ensure that the prospective enlistee's expectations are realistic and his goals are achievable.

The recruit should be informed of the fact that the early part of his career will include simple and sometimes tedious duties of prolonged ship's work and mess-cooking. Recruits also need to understand that the Navy is "human" and is composed of individuals having a wide range of leadership capabilities. Every supervisor is not a good leader and the recruit will encounter obstacles and frustrations because of this and because of the complexities inherent in any large size organization. Each recruit must be adequately informed as to the process, purpose, and utility of the chain-of-command. The recruit must be apprised of his rights but he must also be made aware of his duties and responsibilities and the consequences of neglect.

Within the operational environment, every effort should be made to properly indoctrinate the new sailor to his job. The duties required for shipboard daily living and operation must be a continuation of what has been learned in recruit training, apprentice training or "A" school. For example, the enlistee will be quick to note how discipline is administered and whether or not his superiors respect the chain-of-command.

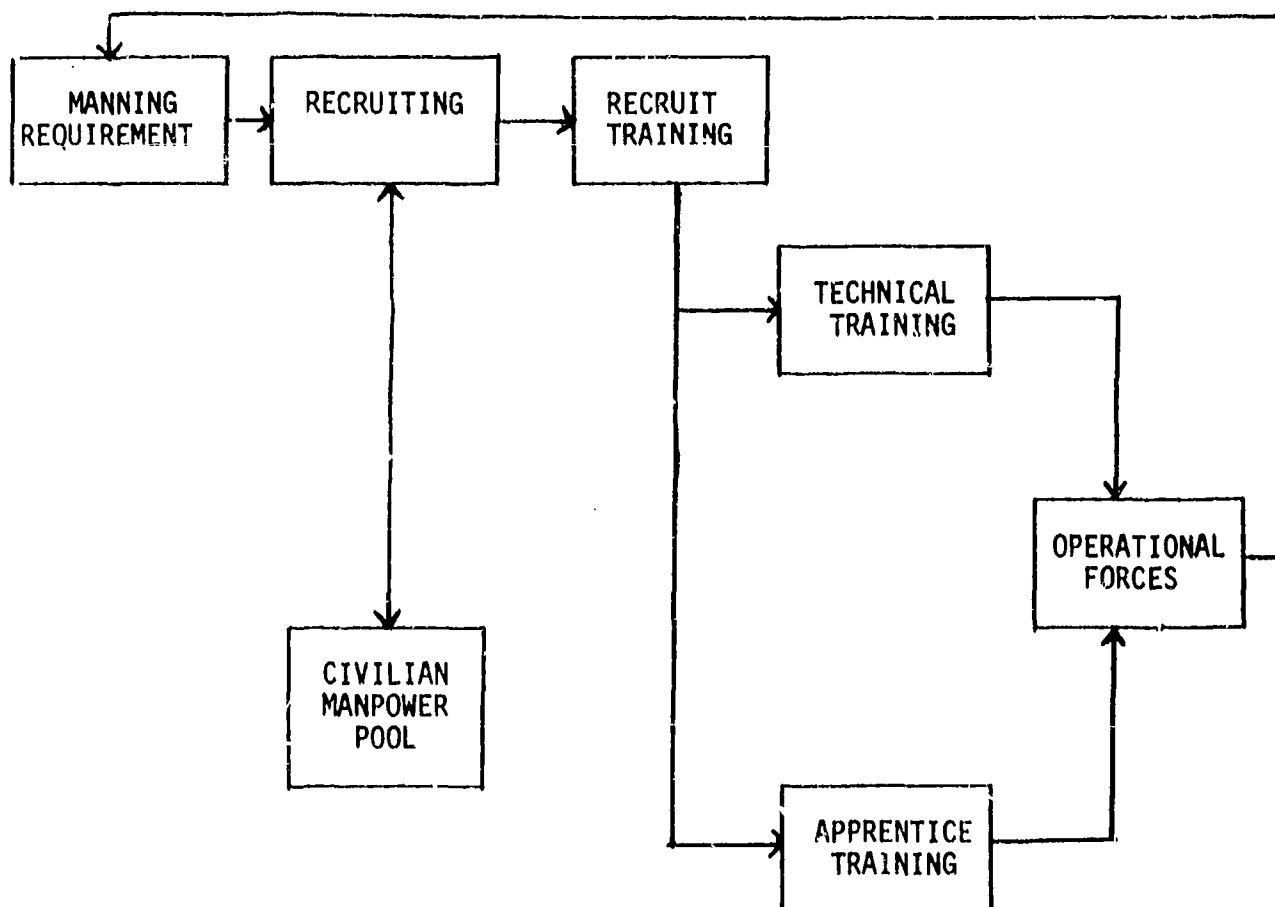


Figure 2. Initial Enlistment and Training Pattern

Information from the operational environment indicates that the rate of disciplinary actions and probable subsequent discharges is considerably higher for those persons with no designated career field. Interviews with sailors indicate they were led to believe that skill training, closely related to their chosen field, would be provided relatively early in their careers. In many instances they found this not to be the case. During recruit training they were led to expect that aboard ship they would perform as team members but found instead a setting of individual competition and compartmentalization once aboard ship. Interviews indicated a lost feeling among recruit training graduates

and a sense of not belonging to any organization when suddenly placed into an individualized environment. This feeling, coupled with an inability to manage personal affairs, too often signals oncoming discipline problems which result in the trainee's early release from the Navy. Training must be realistically aimed at the operational environment as it exists in fact and provide incoming personnel with the capability to function effectively within that environment.

Recruiting and Recruit Training. There is an increased emphasis on accurately defining Navy jobs and the personnel requirements for those jobs. Communication interactions between the recruiting command, the training command, and the operational command will continue to be a critical issue as the process of matching incoming personnel with job training requirements develops.

Increased emphasis will need to be placed upon refinement of the initial screening process both in the administrative and the medical areas at the time of enlistment. Such action is required to reduce the amount of duplicate processing now occurring after the arrival of the enlistee at the RTC. For example, cases of fraudulent enlistment and physically unqualified personnel are routinely uncovered during administrative processing at the RTCs.

The concept of an enlistment contract with the Government on behalf of the recruit remains a weak area. Many recruits do not realize that they have a responsibility to the Navy to perform to the best of their ability as one party of the contract. This particular element requires increased emphasis during the pre-enlistment phase of the recruiting process.

Peak loading causes havoc at the RTCs during certain periods of the year in terms of personnel manning and support required to handle the situation. Closer coordination between the recruiting command and the RTCs would allow the present short lead time notification of incoming recruits to be improved, thus providing the RTCs more time to prepare for incoming enlistees. Peak loading also has a direct impact on the attrition rate. Not only does the attrition rate rise, but the screening process becomes less sensitive. This permits recruits to graduate who are less than adequate and eliminates those who might have succeeded, given more assistance and counseling under normal conditions.

A considerable amount of time in recruit training is devoted to adaptability screening. A long-range goal of personnel procurement and Navy training should be the development of better adaptability testing instruments and procedures. This would lessen the time and effort devoted to adaptability screening during recruit training.

Career determinations in many cases are made too early in the individual's career without adequate knowledge on the part of the recruit. This leads to dissatisfaction when the recruit becomes more knowledgeable of Navy occupations. Further frustration results from a personnel system which is slow to respond to personal requests for rating changes. There appears to be no simple solution to this problem since it is interwoven with the necessity of early "A" school quota determination. However, this problem should be addressed by Navy managers.

Recruiting and Technical Training. The concept of using special inducements as recruiting aids has been successful from the recruiting standpoint but has created in-service morale problems. The program should be reevaluated. A number of cases were reported where individuals were enlisted with guaranteed technical schooling and found unqualified or incapable of completing training at either the recruit training level or technical "A" school level. Two causes were cited. First, the selection criteria for such guaranteed technical training is less than adequate to assess all factors related to success and, second, the mandatory quota system imposed upon recruiters at times forces them to give inducements to substandard enlistees in order to meet quotas. The monetary bonus for completion of certain technical training guaranteed some enlistees, but not available to others selected for similar training after enlistment, has been another demoralizing factor. This is particularly true when the trainee with no bonus guarantee surpasses the bonus enlistee in academic performance.

Guaranteed promotions to certain enlistees, not to be confused with those for completing specified levels of technical training, have created morale problems at the operational level. These promotions (called "instant CROW") are a source of frustration to the motivated striker who cannot earn his way up the ladder due to restricted promotions or the time in rate requirement. Most often, the striker has demonstrated a technical job competence superior to that of the newly arrived higher rated school graduate. The inequities resulting from a concept designed to aid a recruiting problem have, in effect, created a more serious morale and retention problem further down the line. It is proposed that the incentive enlistment programs be reevaluated based on the situation.

Recruit Training and the Fleet. The RTC currently receives intermittent feedback on the quality of recruit graduates by informal interface with the Fleet and by the assignment to RTCs of personnel from the Fleet. For example, the CC, usually an acquisition from the Fleet, evaluates the recruit during the training period as a person he would or would not like to serve with. While these methods have some success, they do not consistently select the recruits who would be most useful to the Fleet.

Observations and interviews indicate that discrepancies exist between Fleet-stated requirements and the perceived capability of the recruit graduate. Cited discrepancies by the operational forces included lack of discipline, poor personal hygiene, lack of responsibility, and being dangerous to self and others from a safety standpoint. The prevailing opinion at the operational level was that the present training system would not provide an adequately prepared sailor for the future Navy. This largely reflects the current emphasis on training vaguely defined military attitudes during recruit training rather than concentrating on those behavioral skills needed to achieve personal and Navy goals.

Two methods are worthy of consideration for providing specific data upon which to base curriculum change and evaluation of the recruit training system product. First, an end-of-recruit training assessment should be made, administered by each RTC, and the results consolidated and evaluated by the Chief of Naval Technical Training (CNTECHTRA). Second, a continuous sampling feedback system from the Fleet should be established and administered by CNTECHTRA.

Apprentice Training and the Fleet. The apprentice training program was established to provide an entry level of technical competence to recruit training graduates being assigned directly to the Fleet rather than via "A" level technical schools. An analysis of apprentice training was not within the scope of the TAEG study; however, aspects of the program were observed due to the close relationship to recruit training. The present success of the apprentice program reflects the dedication and ingenuity of the personnel associated with it since little in the form of training equipment support has been officially provided. The training offers a high degree of realism in the form of "hands-on" training while providing an environment more related to that of the Fleet. There were a number of differences noted as to policy, administration, and training across RTCs. The reasons for these differences should be identified and effort directed toward providing a more uniform training program.

Technical Training and the Fleet. The purpose of "A" school technical training is to provide an entry level technician to the Fleet. It was the consensus of those interviewed that this is exactly what occurs. Unfortunately, what appears to be desired by the Fleet is a well-rounded sailor capable of performing as an entry level technician when required. The recruit training graduate entering the technical training track of the system is not exposed to the apprentice training offered the non-"A" school track personnel. Much of his initial Fleet assignment, however, requires that he perform the basic skills acquired through the apprentice training program.

The living environment during technical training is relatively unsupervised as compared to that of recruit training or in the Fleet. It is reasonable to assume that greater consistency in the level of control and in discipline across recruit training, technical training, and the

Fleet would have a stabilizing effect upon morale while maintaining and reinforcing desirable habits initiated during recruit training. Consideration might be given to the concept of a school detachment, similar to that of the Marine Corps and some Navy schools, at all school sites which would provide an organization dedicated to supervision and counseling of students.

Recruit Training and Technical Training. In order to maintain the technical capability of the Fleet, the Navy requires that in excess of 60 percent of each recruit graduating class be eligible for technical training prior to Fleet assignment. Today, approximately 85 percent of incoming recruits are eligible for "A" school assignment. Many trainees, however, lack the capability to adjust from the group-disciplined environment of recruit training to the more self-disciplined environment of the "A" school. A supervisory structure for students similar to that offered for consideration in the preceding discussion would help alleviate the problem. In addition, familiarization with different types of Navy training approaches which the trainee could expect to encounter during his Navy career should be considered for inclusion in the curriculum.

CHARACTERISTICS OF CURRENT RECRUITS

The recruit of today is usually a high school graduate who has volunteered to serve for some specified period of time. The majority of those interviewed during this study have plans to return to the civilian job market or to continue their education as civilians. The opportunities for training within the Navy and by way of the GI bill, when their enlistment term expires, have been important factors in the enlistment decision. Another important factor is the presently depressed economy. A large number of today's recruits have been unable to find job opportunities in the civilian community and consequently elected to join the military.

Traditionally, volunteers have entered the Navy with some social and educational disadvantages and have viewed the Navy as a route to a better life situation. By comparison, the volunteer of today is better educated and while he is generally capable of achieving his goals, this alternative is not available to him in the civilian economy.

Today's recruit is not significantly different from those of the conscription years in that many, with a high school education or better, have had to change their plans due to financial difficulties. While today's recruit may view the military as a less than satisfactory substitute for college or an occupation, for the most part, he will try to succeed in spite of his lack of commitment to the military as a career.

MANAGEMENT OF RECRUIT TRAINING

The three RTCs are required to provide relatively identical graduates to the operational forces. However, Fleet interviews, discussions with ashore training facility managers, and observations at the three RTCs lead to the conclusion that graduates differ in their training and that frequently newly arriving graduates can be identified with a specific RTC based on their initial actions and attitudes. Although no in-depth examination of management was conducted, some effort was devoted to looking for the causes of these differences.

CNTECHTRA has issued an approved curriculum which prescribes the minimum material to be taught, yet implementation and scheduling is the prerogative of individual RTC Commanders. It has been noted that each RTC emphasizes different curriculum areas, both technical and military, and conducts locally designed experimental programs to improve instruction. In addition, the physical plant at each RTC is different. The combination of circumstances particularly the somewhat autonomous character of each command leads to the development of different student products.

A management problem shared by all RTCs is associated with logistics and budgeting. Each commander, for purposes of logistics, functions through the local base commander upon whom he must rely for support. Thus, a significant proportion of the resources and management time is devoted to logistics. RTCs prepare and submit individual budgets. This causes the priorities for needed items, such as training aids or facilities, to be the prerogative of the individual command. The three commands, because of a perceived difference in needs, may become more, rather than less, dissimilar.

TRAINING GOALS. Training goals appear throughout recruit training in several variations of the CNTECHTRA-stated mission. A composite of these goals as stated by the three RTCs follows: (1) effect a smooth transition from civilian to Navy life, (2) promote the dignity of the individual, (3) inculcate an understanding and appreciation of the fundamental workings of democracy and the Navy's place in the Democracy, (4) develop a desire for self-improvement and advancement, (5) promote high standards of responsibility, (6) provide knowledge and skills to enable the recruit to be of early usefulness to the Navy, (7) develop an understanding of and observation of Naval customs and traditions, (8) stress pride in self and in the Navy, and (9) provide the Navy with personnel possessing an effective level of physical fitness.

The above stated goals are not explicit enough to provide the necessary guidance to the training community for understanding and conducting recruit training. They do not provide sufficient specification of desired behaviors to permit management to determine priorities to be accomplished or to measure the degree of accomplishment. As currently

stated, the goals lack the precision required for implementing a standardized training program.

STANDARDIZATION. While the recruit training system should encourage innovation, it can ill afford to turn out a product of unknown quality. The lack of standardization in the present training system permits three quite different training programs to exist. This cannot be accounted for solely on the basis of climate and facility differences. Key staff and training personnel do not have adequate opportunity to interface with their counterparts at the other RTCs so that the best of each training program might be applied to the overall recruit training effort. Important innovative thinking and practice are occurring at the RTCs, but the crossfeed of these ideas and practices is minimal. A single, standardized recruit training program, incorporating the best of each of the RTCs, should be a basic consideration for future recruit training.

The application of instructional system design techniques will assist in the identification of curriculum content, provide specific learning objectives, and aid in the selection of appropriate methods of instruction. This will not, however, guarantee standardized instruction since current policy permits each RTC to develop its own lesson plans and allows each instructor to add his own individuality to that lesson plan. For whatever cause, this often leaves the major points of the lesson plan understressed or minor points overstressed. The future will require a tightening up of the instructor guidelines and a monitoring system which ensures that objectives are being achieved.

The current effort by the CNTECHTRA to update the present curriculum (1973) by providing objectives stated in behavioral terms should be strongly supported at all command levels. The curriculum model of the future with its supporting documentation should move toward a greater degree of standardization to ensure that the relevant context is covered and that the training accomplished can be readily evaluated against measurable objectives.

CURRICULUM CONTENT. The CNTECHTRA-developed curriculum (1973), with subsequent changes, was reviewed by TAEG and observations were made at the RTCs as to implementation of the program. The curriculum is divided into two distinct and separate areas--military and technical training. This results in a complex program and it is observationally difficult to determine whether instructional sequence follows a prescribed pattern. The program is further complicated by the inclusion of mandated DoD topics and the adaptability screening process.

Based upon an analysis of the present curriculum and the perceived mission of recruit training, it is considered that the topic titles currently addressed in the curriculum generally meet the goals of the future. However certain content changes and emphasis will be required.

The present curriculum does not define the objectives of each topic or subtopic in sufficient detail to provide adequate guidance to the RTCs for the development of instructor guides and individual lesson plans.

A comparison of similar topics currently taught at the three RTCs indicated that the RTCs differed in the amount of material covered in the presentations and in the level of comprehension. In some instances, the material was inappropriate in that the subject was not addressed directly. Some presentations left out or understressed information considered by TAEg to be critical to recruit training. The introductory section of the current CNTECHTRA curriculum provides valuable insight into the purpose of instruction. There was little indication at the immediate training level that those conducting instruction were aware of such information.

The current updating of curriculum topics by CNTECHTRA should provide needed information for proper preparation of instructor guides and lesson plans. It is, however, essential that objectives of recruit training be defined in behavioral terms which can be evaluated for training effectiveness. It is critical that each person involved in instruction be thoroughly indoctrinated in the intent and purpose of the training he is conducting.

EVALUATION OF RECRUIT TRAINING. An effective program for the evaluation of the individual and the training program is essential. Evaluation should not only measure individual achievement but also assess the methods of instruction, the instructor, and the effectiveness of the training program. It is questionable whether the present methods effectively assess these functions. The problem stems, in part, from the present emphasis on broad mission statements rather than on specific measurable goals; i.e., the stated objectives of individual topics and subtopics are not couched in measurable behavioral terms. For example, the recruit who provides paper and pencil response on how to remove the magazine of an M14 rifle may not be able to perform the task on the weapon. Likewise, the individual may be able to list the pressure points in stopping bleeding but not be able to properly demonstrate the method.

Evaluation must be carefully conceived and implemented to improve the training system and to ensure that the individual recruit can realistically meet the requirements of the stated objectives of the individual topics. This can best be accomplished by placing emphasis on performance based achievement testing.

Unit Competitive Evaluation System. Competitive training evaluation among recruit companies appears to stem from the desire to instill a sense of pride in being a member of a Navy unit which, through team effort, may achieve recognition for excellence in performance. Information gained during interviews with CCs and recruits raise a number of serious issues as to the value of the existing company competitive system. All

too often it appears to be more of an evaluation of the performance of the CC rather than of the individual or his company. In-depth observations at the company level lead to the conclusion that how to "beat the system" is being taught in lieu of how to work within the system. Many CCs and recruits object to the emphasis placed on the competitive system where whole companies are "punished" or downgraded based upon the performance of the CC or one recruit in the company. Commanders need to make clear that it is the recruit and not the CC who is being evaluated. As stated in CNTECHTRA's Recruit Training Curriculum: "The training of the individual must be the primary concern of the Recruit Training Command." At present, RTC San Diego is addressing this problem by implementing a revised competitive system which is placing the emphasis on the individual.

LENGTH OF RECRUIT TRAINING. Management will always exert pressures for maximizing efficiency of operation. Thus, any orientation-type training, because of the large trainee throughput and expense involved, will be subject to examination for time savings with consequent cost benefits.

There is some minimum amount of time required for the assimilation of personnel into a new environment. It is impractical to expect acceptable job performance in less than this minimum time. This is true regardless of the mental quality of the recruit input and is substantiated by the fact that the level of attrition has remained relatively unchanged in spite of the recently improved mental qualifications of incoming personnel.

Many past changes in recruit training have occurred in an attempt to keep in step with the changing mental qualifications profile of the available manpower pool. What has been essentially ignored in planning is the need to accommodate other changes that have taken place such as innovative training techniques and differences in the attitude of youth toward the military and authority.

Although the length of recruit training may be reducible in terms of teaching the curriculum more efficiently, the advisability of doing so is debatable from the standpoint of adaptability screening which remains a very necessary and time consuming part of recruit training. For example, a significant reduction of recruit training time might appear to be a cost savings. However, a long-term negative impact resulting from such a decision could be a lower percentage of quality recruit graduates resulting in higher overall costs to the Navy. This could occur because more of the screening process would have to take place at some later career point, at greater cost to the Navy. The point in training where orientation occurs is a management decision. It seems logical to conduct as much of this training and screening as possible where it is most cost effective; i.e., during recruit training rather than at the "A" school or within the operational forces.

SUPPORT OF RECRUIT TRAINING

PERSONNEL SUPPORT. Recruit training is only as good as the staff, CCs, supply, medical, dental, or other personnel assigned directly to, or in

support of, the recruit training program. The majority of personnel observed and interviewed are devoted to the job of making qualified sailors for the operational forces. Regardless of the assignment held, the individual who interfaces with the recruit must present the highest example in bearing, uniform and conduct. As an illustration, every recruit training activity visited (Army, Navy, Air Force, and Marine Corps) was concerned about the image conveyed by support personnel; i.e., medical, dental, and supply, who came in contact with the recruit. It was the general opinion of all services that all personnel associated with recruit training should receive some orientation toward their position and that supervisors should ensure that personal standards are articulated and consistently met.

Company Commander. The CC is the single most important individual in the recruit training process. The demanding role of leading a Navy recruit company requires a dedicated and capable individual. This principle is recognized by all the services. Extended effort is made in the selection and training of Army Drill Sergeants, Air Force Military Training Instructors, and Marine Corps Drill Instructors. While the technique of selection varies among these three services, the emphasis on leadership, military bearing, physical condition, professional attitude, and motivation are some key elements considered. On the other hand, the Navy selection process is frequently based on the provision of shore duty for deprived rates with a detailed screening process only secondary.

There are significant differences in the ratio of unit leaders to trainees across the military services. The Navy places a heavy responsibility on its CCs by assigning only one petty officer per company (approximately 75 men). The other services have an assignment ratio of 1 to 25. The requirement for the petty officer to lead and manage up to 80 men results in the individual leader not having enough time to instruct, counsel and administer the many aspects of the recruit training program. With the other services, two or more NCOs of varying pay grades are assigned to each basic training unit. In addition, the other services place emphasis on the assignment of junior officers who provide leadership and supervision to the basic training program. While the Navy has recognized the demands placed on CCs and has made significant effort to improve the situation, the assignment of recently graduated recruits as Company Commander Assistants is questionable. These recent recruit graduates do not meet the requirement of experienced leadership.

In order to make the CC billet more attractive, two major issues should be addressed. First, the selection and assignment policy for CCs should be reviewed to improve (1) desirability of assignment, (2) career enhancement, (3) physical and mental profile required for NEC³,

³ RTC San Diego is developing a physical fitness program which addresses the issue of CC physical profile as part of Company Commander School prerequisites.

and (4) assignment ratio of CCs to recruits. Second, the Functional Area Codes (FACs) described in OPNAV Instruction 1000.16C of 1 October 1973 and CNO letter serial 104E/10185 of 30 August 1974 should be reviewed as they apply to CCs and instructors. The three FACs in the Manpower Authorization Table, OPNAV Report 1000/2, used at the RTCs are G, I, and L. Male staff personnel not required to be technical instructors are either G or L, both of which, by definition, are used to provide deprived rates with shore duty billets. As a consequence, male CCs are predominately from deprived rates and do not represent a cross section of the Navy. This situation may not be detrimental, provided that a thorough screening of CCs is conducted, but under present austere manning conditions such screening does not always occur. Interviews with CCs and ex-CCs revealed a great deal of dissatisfaction caused by the assignment of men to this position who did not want or like the job. The choice given them was recruit training or another ship. In two known instances, 1 requested sea duty prior to the expiration of their tour ashore rather than remain as a CC. This particular problem is not applicable to females since there are no deprived female rates. Section III of this report addresses this problem in more detail and proposes a screening process.

Company Commander of the Year. The success of recruit training is dependent on the efficiency, leadership, and devotion to duty of the CC. To the trainee the CC is the personification of the Navy. His faults and strong points, his leadership and devotion to duty, and, above all, his response to higher authority are the most lasting impressions recruits receive. Considering the importance of this role to the Navy, some special recognition to the "best" of these leaders could be an incentive to greater effort.

The Army Training and Doctrine Command (TRADOC) selects the Drill Sergeant of the Year, who functions in a manner similar to the Navy's Master Chief Petty Officer of the Force. This individual is assigned to TRADOC and is concerned with all Drill Sergeants assigned to the various Army activities. The establishment of a "Company Commander of the Year" award within CNTECHTRA based on a premise similar to the Army's award to the Drill Sergeant of the Year would enhance the prestige and standing of the CC.

Recruit Petty Officers. The practice of using recruits as recruit petty officers has merit in the areas of leadership development and economy. There is some criticism, however, of leadership by recruits who are as inexperienced as those being led. The utilization of recruits in this role requires functioning beyond their capability and requires a disproportionate share of the CCs time and attention. Consideration should be given to training recruit petty officers outside of the normal curriculum and prior to such assignment.

ADMINISTRATIVE SUPPORT.

Inprocessing. The concept of a consolidated inprocessing facility at each RTC is a move toward system efficiency. Until facilities planned for this purpose at RTC Great Lakes and RTC San Diego can be completed, time lags will exist during inprocessing due to the travel time involved between facilities accomplishing different processing elements. When these projects are completed, all administrative, medical, dental, initial clothing issue, and swim qualification functions can be accomplished in an efficient manner. It was noted that inprocessing facilities generally do not receive the same level of attention regarding building maintenance and cleanliness afforded regular barracks.

The practice of using recruits with very limited Navy experience to supervise newcomers at the inprocessing facility is questionable. Incoming personnel should interface only with trained, experienced personnel capable of handling the varied physical, psychological, and administrative problems that occur during the inprocessing phase. In the interest of contributing to good initial impressions of the Navy, it is the belief of TAEG that only qualified CCs should supervise recruits during inprocessing activities.

Medical and Dental Care. Most interviewees considered medical care to be adequate for incoming personnel. However, the shifting of dental work from recruit training to the first duty station causes problems. First, the person may be assigned to a ship ready to deploy and, second, the requirement to provide care for new personnel means overloading heavily committed facilities resulting in delay or neglect of dental care for personnel already onboard. This postponement of dental work means needed care must be accomplished at the next duty station and if the capability is not there, this results in dissatisfaction to all concerned.

Uniform Issue. Some recruit graduates arrive at their first duty station with incomplete sea bags; for example, too few work dungarees, no peacoats or without provision for obtaining required safety shoes. Recruits who are not issued a full sea bag receive money in-kind for unavailable items. Availability of clothing aboard ship or overseas is usually minimal and the person may be unable to purchase the required items or he may have already spent the money for something other than the necessary clothing. Effort should be made by management to insure that recruit graduates receive complete sea bags and consideration be given to supplemental clothing issues for specified ratings.

Numerous instances were reported where sailors, newly assigned to Fleet units, had to be taught how to wear the uniform, tie their ties, and change cap covers. Since the recruit spends most of his time during training in the work uniform, the problem probably results from a lack

of opportunity to become familiar with other attire. During recruit training, the trainees should become familiar with the wearing of all classes of uniforms.

TRAINING SUPPORT.

Training Facilities. In general, the physical plants at each RTC, although of different design, meet the basic needs of recruit training. The requirement for consolidated inprocessing facilities at RTC Great Lakes and RTC San Diego will remain a problem until the proposed facility plans have been completed.

Security and training interference are problems at RTC San Diego due to the physical location of the RTC in the overall training complex. Military and civilian personnel, external to the RTC, and to a limited extent visitors, routinely have access to the facilities and grounds due to base traffic patterns. RTC Great Lakes and RTC Orlando are relatively isolated from other training areas and do not have this problem. RTC San Diego has proposed a solution to this security problem and management should strongly consider this proposal.

Both RTC Great Lakes and RTC San Diego have transportation problems due to the location of the fire fighting training facilities. RTC Great Lakes has an additional problem in that severe weather prohibits use of the fire fighting facility during winter months. These issues of inconvenience related to specialized training facilities impact upon the time allotted for training and should be considered when the length of the training period is established. In the case of the fire fighting facility at RTC Great Lakes, plans should be implemented for initial training on a year-round basis.

Training Materiel. The TAEG investigation revealed existing ineffective policies and procedures related to the funding, procurement, and utilization of training aids and devices. Much of the training at the RTCs occurs using the lecture method in the classroom. Most of the classes observed were made up of two recruit companies resulting in a class size of over 120 students. The majority of these classes are supported by less than adequate training aids and devices.

Several examples illustrate the need for a standard policy and emphasis on standardization of equipment. Instructional television (ITV) is used to a limited extent by two RTCs while no use is made of ITV by another. In most cases the films used for ITV, as well as many of the regular training films, are outdated and were not designed to meet the specific requirement of recruit training. Overhead transparencies and 35mm slides are used at all RTCs to some extent. In the case of overhead transparencies, most are poorly designed for effective communication and ill suited for large group viewing.

While each RTC has a limited capability for the development of training aids, there appears to be no consolidated effort to standardize and provide to the three RTCs high quality training materiel. CNET Instruction 7043.2 (Other Procurement, Navy (OPN) Budget Procedures) provides information and guidance for the justification, budgeting, and funding of OPN equipment within the Naval Education and Training Command that includes training equipment and films. However, there is little evidence that requirements of the RTCs are being budgeted.

An organized procedure, managed by CNTECHTRA, should be developed for acquisition, standardization, and utilization of training aids and devices. A higher priority should be assigned to RTC requirements for training materiel.

Library Facilities. A detailed examination of the library facilities was made at one RTC with only a cursory look taken at the other RTCs. The hours of operation appear to meet the needs of staff personnel but are such that recruits find it difficult to use these facilities. Little emphasis is placed on the availability of the library for the recruits. A TAEG review of usage records covering a two-month period indicated that recruit use was negligible and the staff use was low. One library placed emphasis on technical publications while the other two emphasized reading for pleasure. Many of the technical publications examined were outdated and should have been replaced. These publications did not appear to be used by recruits.

A determination should be made on maintaining a library at the RTCs. If it is determined that there is a requirement, then a policy standard should be developed and promulgated.

REMEDIAL TRAINING. All military services presently conduct remedial training programs that are corrective in nature and administered when the individual student is unable to maintain acceptable performance during the training cycle. Service-wide remedial training is provided by special companies for reading, motivation, medical, overweight, physical fitness, and discipline. Of these, the physical fitness program appears to be most successful.

In the Navy poor reading skill continues to be a problem. There is a question as to the value of remedial reading training as is presently conducted. A common complaint of many "A" School instructors and Fleet supervisors is that a significant number of recruit graduates cannot read properly. School supervisors indicate that many recruit graduates cannot comprehend technical materials. At the operational level, graduates, in many cases, cannot read well enough to effectively use basic repair manuals.

The emphasis and methods used by remedial companies vary among the Navy RTCs. The effectiveness of these programs should be assessed. CNET should determine what types of programs are needed and where in the training cycle these programs should be placed. Also, standards and support requirements for remedial programs should be identified.

SELECTED TOPICS

The topics discussed in the remainder of this section cover a wide range of subjects. Although the list is diverse, most are directly related to the curriculum topics of recruit training. Others are of a broader nature related to general Navy problems which present a unique challenge to those in the training world. Of these, the subject of discipline stands out as the most critical.

DISCIPLINE. Interviews with personnel in the operational forces and in Navy technical schools indicate a steady decline in military discipline. Respondents uniformly voiced a growing disregard in the newly assigned recruit graduate for military customs and courtesies, personal appearance, and expected appropriate behavior. At the recruit training level, personnel directly involved with training feel that graduating recruits are motivated to do a good job and they are at a loss to explain the apparent switch in behavior when the recruit reaches his first duty station. Discussions with recruits and recent recruit graduates lead to the conclusion that a large number perceive present society as a kind of "rat race" and the way to cope is to remain detached. This suggests an apparent lack of commitment on the part of young people which is frustrating to those in supervisory positions who interpret it as lack of responsibility.

One possible explanation of the apparent change of behavior of the recruit graduate when he is newly assigned to his first duty station may be that the structured environment and relatively harsh conditions of indoctrination training cause the recruits to band together for their mutual protection. This joining together for survival will contribute little or nothing to the Navy organization. It gives the impression of high motivation to succeed when in truth the goal is to get out of the immediate situation as quickly and efficiently as possible. In actuality, the recruit graduate is ill prepared for his sudden thrust into the more independent operational environment.

Recruit training of today operates primarily in an imposed discipline environment. As a result, recruit graduates encounter difficulties when placed in the self-discipline environment at their new duty station whether it be a technical school or the operational forces. Young people today reflect the trend of a life-style less structured and less disciplined than their predecessors. The solution may be more independence training, where the individual is taught from the beginning of his career to rely mainly on his own resources while receiving support from

the Navy organization. Supervisors must recognize and understand this outlook of youth and transmit certain organizational principles and values without encroaching on personal values.

CHAIN-OF-COMMAND. The chain-of-command is the official flow of authority, up or down the command structure. Navy men of every age and category report to personnel whose supervisory skills encompass a broad range, from outstanding to marginally acceptable. The recruit needs to be made aware of this and taught to cope with the situation, rather than be permitted to bypass the chain-of-command. The attitudes and ideals of young officers are more compatible with those of the young enlisted men than with senior petty officers of an older age group. However, the technical expertise and stable, traditional values of the Navy are transmitted to junior enlisted personnel by senior enlisted personnel. The maturity, job know-how, and understanding of the Navy transmitted by the senior enlisted personnel are important in influencing desirable personnel to remain in the Navy but are often bypassed. This important link in the chain-of-command should not be bypassed. The importance of communicating and identifying with this segment of the Navy population should be instilled in recruit training through more personal guidance on the part of senior enlisted staff. The need for youth to test themselves, to explore, and discover where the limits are, is natural. To permit them to exceed the limits, to coddle, cajole, and be over permissive is to overlook a very important process in their development.

NAVY TERMINOLOGY. The Navy has a vocabulary of terms which is specific in meaning. The terms serve as communication tools or as a shorthand of the profession. The frequent use of correct Navy terminology during recruit training is essential to effective indoctrination.

Terms can have a positive or negative connotation which sets the scene for actions that follow. One example is "pushing boots" or "boot pusher." This is negative in that forcing is implied and is in opposition to the positive leadership implicit in the role of CC. The use of the term "grinder" in lieu of drill deck is another example of negative connotation. Other commonly used terms, related to traditional street slang, provide little positive instructional purpose even though a situation may develop which requires a dressing down.

A number of instances were observed where RTC personnel used civilian terms in lieu of accepted Navy terminology. This was particularly true of the relatively inexperienced Company Commander Assistants. To achieve maximum motivation and achievement by recruits during training, attention must be given to providing the maximum number of positive influences possible. A large part of this relates to the use of correct and proper Navy terminology during training.

BASIC SEAMANSHIP. Basic seamanship includes those skills and knowledges required of all sailors concerning terminology commonly used in deck and boat seamanship, types and size of line, tying basic knots, and nomenclature of deck equipment. Observation of the two sessions devoted to this topic at the RTCs indicates that the recruits achieve less than a minimal capability in knot tying and receive only lectures in other areas of marlinspike seamanship and deck equipment. It is considered essential that more emphasis be placed on performance of skills required for basic seamanship. The idea of "knot of the day" used by one RTC and handling of lines and deck equipment in a simulated exercise would be a better method for teaching the required skills.

WATCH, QUARTERS AND STATION BILL. The key administrative document which controls an enlisted person's actions is the Watch, Quarters and Station (WQ&S) Bill. Yet recruit training devotes only one classroom session to this bill. No practical application of the principles underlying this document is given.

Shipboard organization is constructed around the unit (ship), department, division, and section which may not correlate in a recruit's perception with the regiment, battalion, company, and squad. Interviews with recent RTC graduates and with Fleet supervisory personnel revealed that neither the function of the WQ&S Bill nor the organizational structure upon which it is prepared is understood by recruits. The classroom time appears to be adequate; however, practical reinforcement is required. It is concluded that an RTC administrative structure which parallels a ship's organization and which operates from a posted, modified WQ&S Bill would provide trainees with the familiarity needed to properly use the WQ&S Bill.

SAFETY. Shipboard safety instruction at the RTCs is a continuing concern of the operational forces. While the four sessions devoted to this topic adequately cover basic information, the development of good shipboard safety habits is inadequate. Lack of an appropriate training environment for this type training at the RTCs is evident. Safety training conducted at the RTCs should be reevaluated and methods established to allow more involvement in safety skills and practices.

SWIM QUALIFICATION. The swim qualification program provides a minimally qualified swimmer. Fleet interviews indicate that many recruit graduates cannot meet the basic Fleet swim qualifications. The reason for the perceived discrepancy needs to be analyzed. If there are indeed deficiencies in the program, the addition of training in "drown-proofing" techniques may be required. Since minimum swim qualification is only one part of required survival training, it is suggested that the recruit be provided the basic fundamentals of escape, evasion, and land survival.

PERSONAL HYGIENE. An area receiving high priority during interviews was personal hygiene. Good personal hygiene practices are an adjunct of being shipshape which include the person and living quarters as well as equipment and working areas.

Personal hygiene becomes critical in the restricted shipboard environment, particularly on minor combatants and small support craft that seldom have adequate laundry facilities to maintain clothing in a proper condition. Many ratings, especially engineering ratings, cannot maintain an adequate supply of clean clothing unless these persons wash for themselves. Such training is currently provided for women but is not a part of the formal curriculum for men. The need for this requirement should be evaluated.

Social acceptability by shipmates should be stressed. The practice of not allowing males to keep deodorants as part of their toiletry during recruit training is inconsistent with rules for female recruits and deemphasizes the importance of usage after recruit training. Likewise, the inconsistent local policies across RTCs concerning the use of electric razors cause individual frustrations as well as medical and inspection problems. The reasoning behind "boot haircuts" appears less valid in these days of better sanitation. It seems reasonable to allow a hair style more acceptable to the young modern image that would meet present Navy regulations. Aside from the practical aspect of aiding in proper hat sizing during uniform issue, this compromise would teach the recruit the accepted Navy hair styling regulations to which he is expected to conform throughout his career. It would also align male policies to the present policy for women recruits.

A large element of self-discipline is inherent within the individual's development of good hygiene habits. Since an attitude change is usually involved, initial personal hygiene training must be reinforced beyond recruit training to establish habit. The implication is that young sailors will require supervision in a relatively structured environment after recruit training in order to maintain an acceptable level of personal hygiene as it relates to the shipboard environment and standards set by the Navy.

PHYSICAL TRAINING. Lack of a challenging physical training program was the single most-heard comment from recruits and recent recruit graduates. Discussions with medical and physical fitness organizations such as the Navy Health Research Center indicate that many breakthroughs in the area of physical conditioning have occurred during the past five years. These breakthroughs have merit for Navy adoption. Collateral concern has been expressed regarding the physical fitness of CCs. Further investigation in this general area is called for in order to provide a physical conditioning program that will permit the recruit to not only acquire fitness but offer a reasonable opportunity to maintain physical

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fitness after recruit training. The physical training programs being implemented by RTC San Diego for CCs and recruits with the assistance of the Naval Health Research Center should be considered for all the RTCs.

DAMAGE CONTROL. Damage control is the most significant ship-related functional training offered during recruit training. The all-hands involvement in this area at sea requires that each person understand the basics of damage control prior to reporting to their first shipboard assignment. Instruction should be limited to terminology, elementary theory, and the use of typical equipments with concentration on nomenclature and ship security. Damage control ashore is of similar high priority. Training, monitored by TAEG, included extensive use of films under extremely adverse conditions. These conditions are illustrated by overcrowding, noise interference, and poor lighting. The subject matter of these films was in many instances beyond the comprehension of recruit trainees due to the advanced nature of the content and terminology used.

A provision for increased practical demonstration and participative experience in lieu of the present more passive instruction would provide more beneficial training. For example, a session on ship nomenclature and compartment checkoff lists could be followed by a session under simulated conditions with practical application and reinforcement of the classroom presentation. Similarly, a session concerning the use of the Oxygen Breathing Apparatus (OBA) could be followed by a practical exercise and then, if possible, by a fire fighting session with the backup men wearing the OBA. Carefully prepared lesson plans in conjunction with proper scheduling could incorporate the subcategories of fire fighting and NBC defense under damage control training allowing training in context rather than as independent subjects.

FIRE FIGHTING. Recruit training fire fighting is designed to teach sailors that they can exist and work under stress and that it requires teamwork to extinguish a blaze. Under controlled conditions emphasizing safety, such fire fighting training cannot simulate the majority of fire conditions which may occur in an operational situation. With this in mind, it is suggested that classroom instruction be limited to acquiring knowledge of the basic fire triangle and equipments the person may expect to use in the field. Greater emphasis is required in the area of preparation to fight a fire such as hose coupling, the all-purpose nozzle, laying out the hose, and basic orders used during fire fighting. Currently, fire fighting is not standardized across RTCs. Training should be standardized and should encompass only that content which the recruit needs as a prerequisite to fire fighting training given at his first duty station. The hands-on techniques used at RTC Great Lakes could serve as a model for all RTCs.

NBC WARFARE. Concern for lack of training in this area was evident during instructor interviews. The necessary training can be accomplished

as a part of damage control training. Gas mask and smoke inhalation training is presently adequate. As far as nuclear training is concerned, the recruit fundamentally needs to know only how to close the ship, cover up, and be familiar with the signs which are posted to direct persons to the decontamination center.

HUMAN GOALS. There will be a continuing need for transmittal of the type of information presently being taught, but the content and emphasis require updating. The present Human Goals program within the DoD is essentially a duplication of the Human Goals program that has been conducted within the nation's public school systems for approximately 10 years. Changes are required to orient this training more toward human relations and to make it more relevant to Navy goals.

There is insufficient instruction time in recruit training to significantly affect the person's basic value system. Human relations training should address common Navy problems and be taught in the context of situational need. Information should be conveyed in terms of how to deal with particular living or work situations. The student could be given a number of examples of situations likely to occur and taught skills to cope with them. Drug information, for example, should be presented in the light of drug habituation being a deterrent to maximum functioning of the individual on the job and as a threat to his safety and the security of the country. The emphasis would be on achieving organizational goals, rather than attempting to change deeply ingrained attitudes. The members of a football team, for example, learn to play on the same team with others they do not like or associate with off the field. Their relationships focus on achieving the team objectives. It is concluded that Human Goals training would fare better if structured as a Human Relations and Personal Affairs program.

PERSONAL AFFAIRS. Since the Navy provides not only a job for the enlistee, but also a way of life, it is important to be concerned about how the individual handles his personal affairs. This is a problem area commonly referred to in Fleet interviews. Many first term enlistees are receiving a steady, adequate paycheck for the first time in their lives. Often immediately after recruit training, they purchase a car and obtain a spouse and family in short order. Financial and family adjustment problems follow shortly. Since these may have an adverse affect on the man's job performance and job satisfaction, it is important to provide instruction to prevent problems. Considerable insight can be gained into the difficulties involved in some of these commitments simply through their recognition as potential problem areas. This could be accomplished by role playing or group dynamics interaction under the direction of the CC or included as part of the Human Relations training.

DRILLS AND CEREMONIES. Basic drill formations and movements are inherent to any military organization ashore. Practicality dictates the use of military drill and formation as the most effective way to move personnel in the recruit training environment. Ceremonies such as recruit graduation and morning or evening colors are a traditional military function. Any major curtailment of these functions may have an adverse affect on the esprit de corps as well as preparation for traditional shipboard ceremonies. This training provides an effective method for developing group homogeneity, discipline, and physical conditioning.

Instruction of basic drill as formally outlined in the Landing Party Manual is not followed and is not standard across RTCs. Unlike the other services, exaggerated functional movements, such as arm swing and column movement pivot point step off, are commonly encouraged at the RTCs. Maintaining cadence by stamping the left foot during marching is a generally accepted procedure. As reported by medical officers, this procedure causes knee and ankle injuries. While exaggerated drill and movement are fine for civilian marching bands or specialized drill teams, these practices are not part of basic military drill and should not be condoned.

DRILL RIFLES. The use of the rifle for infantry drill has been a tradition that can be traced to the long standing requirement that each ship organize and maintain a landing party. Since there is no longer a requirement for ships' landing parties, there is a question as to the value of using the obsolete and inoperative M1903 rifle as a part of drill during recruit training. The basic question is, "What does the present drill rifle accomplish that cannot be accomplished by other methods?"

Observation of utilization and support of the M1903 rifle raise a number of issues:

- . The current maintenance of the M1903 rifle by the recruit does not conform to correct procedures for maintaining small arms.
- . Accountability for drill rifles by the RTC, CCs, and individual recruits is very time consuming.
- . Funding requirement for accountability and maintenance is not productive in terms of weapon maintenance and training.
- . There are less costly and time consuming methods to accomplish physical training than by use of the drill rifle.
- . There is no applicable transfer of mechanical or functional skill training from the drill rifle to the current inventory of operational small arms in the Navy.

The conclusion is that the use of the drill rifle as part of Navy drills should be discontinued.

ORGANIZATION. The RTCs are presently organized into regiments, battalions, companies, and squads. The various elements of this organizational structure are deeply instilled in the recruit during his training. Upon assignment to the operational forces, he is part of a ship composed of departments, divisions, and sections and he must now learn a new organizational structure. The basic training activities of the other services are organized into units not unlike those found in their operational force. For example, the Basic Military Training School of the Air Force consists of such elements as flights and squadrons with these organizational elements corresponding to the operational force structure. The TAEg concludes that recruit organizational elements which reflect the organization of the operational forces of the Navy would make training more relevant.

SMALL ARMS TRAINING. The introductory small arms training conducted by the RTCs is a logical first step to familiarization with the Navy total weapons system environment. The initial orientation to mechanical functions, care, cleaning, and basic marksmanship brings to the forefront the importance of defense, need for group and self-discipline, and the practice of safety procedures in a real situation. This program is providing student interest, motivation, and, in the marksmanship phase, immediate feedback.

The program lacks standardization across the three RTCs. This stems in part from lack of proper or safe range facilities and in part from the use of various weapons to introduce marksmanship training. There is a question as to the value of the bolt-action .22 caliber rifle in training except to give some indication of proper rifle firing positions, sighting, and aiming. If the purpose is considered to be an orientation to small arms operation, then the use of the bolt-action rifle provides little transfer to small arms used in the operational forces. If sighting and aiming are the purposes of the .22 rifle, then consideration should be given to proven and less costly techniques that do not require extensive range facilities.

Further investigation is required to determine the design of small arms training. Small arms training techniques in use and being developed by the Army, Marine Corps, and Air Force have potential application to this phase of recruit training, if in-depth training is considered necessary.

FLEET ORIENTATION. This phase of the current recruit training program was added to the curriculum in response to Fleet cited weaknesses within the program in effect at that time. The title is self-explanatory.

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Fleet orientation occurs during the last week of recruit training and is treated as a transition phase between recruit training and first duty assignment. It is the opinion of the TAEG team that Fleet orientation should be embedded in the curriculum and not treated as a separate training phase.

SHIPS WORK. Ships Work is a valuable, functional training experience. It offers opportunity for each recruit to practice and demonstrate leadership which can be used as an indicator of future performance. Duties prescribed during this period of training are not specific task- or job-oriented, nor do they represent a job that would normally be selected by a recruit. Ships Work does introduce the realism of the working party and instills responsibility for Navy properties. Such duty can likewise function as an adaptability screening process since it measures maturity by the ability to cope with less desirable tasks. It is concluded that Ships Work should emphasize the need for this type duty and insure that its purpose is understood by the recruits. Supervision of Ships Work should be by qualified personnel so that evaluation of the recruit in a working environment could be made.

SUMMARY

An analysis of the current Navy recruit training program identifies a number of issues that can be addressed by management for immediate consideration or that require planning now for implementation by the 1980's. A number of specific recommendations are offered. It is recommended that:

- . Training Goals be stated in behavioral terms which can be translated into measurable skills and knowledges.
- . Standardization of the training program be strengthened and monitored by CNTECHTRA.
- . Curriculum contain detailed objectives to provide adequate guidance for preparation of instructor guides and lesson plans.
- . Evaluation of recruit training include internal and external components for use in improving the training system. Internal evaluation should place emphasis on performance-based testing to ensure that the recruit can realistically meet the requirements of training objectives. External evaluation should emphasize an evaluative feedback system from Fleet activities to CNTECHTRA for use in maintaining an acceptable recruit training program.

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- . Training Support Personnel who interface with recruits, regardless of NEC or assignment, receive a formal orientation course with emphasis on leadership by example, military bearing, conduct in presence of recruits, and wearing of the uniform.
- . Company Commander (CC) selection and training be reviewed to achieve:
 - .. Career enhancement by assignment to CC duty
 - .. A decreased ratio of recruits to CCs
 - .. Establishment of a physical profile for NEC
 - .. Review of FACs described in OPNAVINST 1000.16C relating to CC
 - .. Standardization of CC training
 - .. Strengthening of the selection process for CCs
 - .. Establishment of Company Commander of the Year award.
- . Company Commander Assistant program utilizing recent recruit graduates be reviewed for adequacy and upgrading of assistant category to more experienced personnel.
- . Recruit Petty Officers be provided training outside the normal curriculum and prior to such assignment.
- . Inprocessing Facilities at RTC Great Lakes and RTC San Diego receive added support during ongoing effort to upgrade such facilities.
- . Training Materiel be managed by CNTECHTRA with emphasis on acquisition, standardization, and utilization.
- . A CNTECHTRA policy be established relating to need for and utilization of RTC library facilities.
- . Selected Topics:
 - .. Discipline. Place emphasis on self-discipline as a prerequisite to group discipline.
 - .. Chain-of-Command. Stress the concept of senior enlisted personnel transmitting traditional values and technical knowledge to junior enlisted personnel.

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- .. Navy Terminology. Place emphasis on use of correct Navy terminology and use of positive language during all recruit instruction.
- .. Basic Seamanship. Initiate performance-based training in lieu of more passive lecture-demonstration approach.
- .. Watch, Quarters and Station Bill. Adapt for use in recruit training as the primary scheduling format to train recruits.
- .. Safety Training. Evaluate to determine those safety components that can be effectively taught during recruit training.
- .. Swim Qualification. Ensure that recruits meet basic Fleet requirements for swim qualification. Orient recruits to the basic fundamentals of escape, evasion, and the concept of land survival.
- .. Personal Hygiene Training. Standardize to meet shipboard requirements and align male and female grooming policies.
- .. Physical Training. Establish at all the RTCs the program developed for Company Commanders and recruits at RTC San Diego.
- .. Damage Control Training. Reevaluate with emphasis on practical demonstration and participative experience.
- .. Fire Fighting. Place greater emphasis in the area of preparation to fight fires.
- .. Personal Affairs Training. Place more emphasis on financial and family adjustment problems. See Human Goals.
- .. Human Goals Training. Make training more relevant to the Navy under a new title, "Human Relations." Such training would include the area of personal management of finances, dependent privileges and benefits, consumer practices, and individual legal responsibilities as well as traditional socialization training.
- .. Drill and Ceremonies. Continue; however, marching movements and procedures should conform to standards as directed by the Secretary of the Navy.

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- .. Drill Rifles. Eliminate from recruit training since the rifle, especially the M1903, is not part of the ship's normal equipment.
- .. Organization. Restructure recruit training from regiments, battalions, companies, and squads to ship related elements; i.e., section, division, department, and ship.
- .. Fleet Orientation. Embed leadership, keeping the ship clean, shipboard watches, and facts about Navy ships in the curriculum.
- .. Ships Work. Emphasize the value of this training and use qualified personnel for supervision and evaluation.

SECTION III

THE FUTURE RECRUIT TRAINING SYSTEM

Section II of this report discussed the issues of external influences on recruit training, the characteristics of the entering recruit, and a number of areas of concern to management as they are related to the training program currently in existence. This section examines these issues with the future decade in mind.

THE ENVIRONMENT OF THE 1980's

A projection of future recruit training involved the analysis and synthesis of information from sources listed in the bibliography. The rapid advances in technology over the next decade will have a major impact on individuals entering the Navy and will consequently influence training. Automation will eliminate many semiskilled and unskilled jobs while increasing the number of technically oriented and professional occupations. This will bring about competition for the most talented manpower. The increasing pace of professionalism will extend into the military services. This, coupled with the growing acceptance of the fact that human resources rather than physical resources are the key to organizational success, will dictate that the Navy attend to those factors which promote the professional development of the individual as well as organizational development.

Traditional recruit training, valid during the post-World War II era, will not meet this requirement. Both content and methods of instruction must be redesigned, updated, and modified in order to integrate the changes in technology and attitudes occurring in both the civilian society and in the Navy.

THE FUTURE RECRUIT

Personnel patterns, the numbers and kinds of people, will differ in the decade ahead. Demographic statistics published by the Westinghouse Center for Advanced Studies and Analyses (1972) cited a dwindling age 17 to 19 male manpower pool. This trend was confirmed by Business Week (Franklin, 1976). At the same time, the Navy manpower requirements for quantity and quality will be increasing in response to an increase in the number of ships to be manned and the ever increasing technological complexity.⁴ Current plans include the expansion of the Fleet from the present level of about 490 ships to a force approaching 600 ships requiring a Navy manning increase of approximately 70,000 above the present level. Increased training capability may be required; certainly there will be an increase in the recruit training load. The resulting competition for manpower presages the necessity to enlist women in larger numbers as well as marginal physically or educationally disadvantaged persons.

⁴ Defense Planning for the 1980's and the Changing International Environment. The Naval War College, 1975.

As a result of the current success of the All Volunteer Force (AVF) and unfavorable societal attitudes toward a military draft, the concept of an AVF will continue to be popular. This has implication for predicting the quality of recruit input. The major factors in the success of an AVF have been the depressed economy, monetary enlistment inducements, increased salary levels in the lower ratings, and post-service or in-service educational opportunities. The continued success of the program depends to a large extent on the willingness and ability of society to continue support. Either a withdrawal of support or a burgeoning economy could significantly affect the quantity and quality of available enlistees. Another critical factor is the elimination of GI benefits. Their elimination will surely affect the decision of many young persons to join the military. In-service training will continue to be an important consideration in the enlistment decision. The majority of young men enter with the idea that they will receive training for obtaining a better civilian job after leaving the service. Considerable civilian emphasis has been placed on vocational training which will weigh heavily on the career decision of many young people. See appendix B for a discussion of the expected impact of vocational technical training during the 1960's.

Important to the successful conduct of training are the personal characteristics of recruit input. The traditional volunteer looked to the Navy for a better way of life. A military career was sought out because of the lack of civilian opportunity. The volunteer came from a rural or farm community and was more amenable to the military way of life. The rural or farm youth will be in the minority during the next decade. Future recruits will be drawn primarily from an urban environment. This person will be less amenable to enforced discipline and military socialization when compared to youth of the past. He will be more rejecting of autocratic practices, less impressed with the role of serving one's country purely for patriotic reasons, more demanding of challenging jobs, and more insistent upon adequate human resource practices. When he enlists, he will be eligible (or soon be eligible) to vote, enter into contracts, drink alcoholic beverages, and organize his life as he pleases. Having these new freedoms and responsibilities at an earlier age, he will require training in locating and selecting best alternatives for making many decisions. The Navy has not effectively addressed this type of training heretofore and it will place an additional training burden upon the Navy to assist these young people with the satisfactory integration of life-style and the working environment.

The typical enlistee of the next decade will have spent a significant portion of his life in direct exposure to educational practices which encourage involvement and a questioning, challenging posture on his part. When enlistees with this background enter the Navy system, which requires more conservative practices, conflict exists unless the training provided is capable of redirecting individual energies for the benefit of all concerned. Future training must address this issue.

The labor unions have turned their attention to the unionization of the military. While a huge majority of the military are against this, the progress of unionization will depend considerably upon the relevance of management practices to the changing American society. The major impact of the threat of unionization for recruit training is the requirement to recognize the importance of the human resource and to use modern management practices in the orientation and training of new recruits.

IMPACT OF RECRUIT CHARACTERISTICS

The characteristics of the future recruit dictate a training curriculum responsive to the needs of a new type of enlistee evolved from our changing society. A greater demand will be placed on the training system to provide training in the areas of human relations, self-discipline, and remedial or enrichment training in the nature of reading, computation, and even socialization.

TRAINING PRIORITIES. Priorities of training should reflect those components that will permit the Navy man to function adequately across both the Navy and the civilian environment. The Navy is a highly structured and organized sector of society which has special measures of control and discipline. The need exists to make incoming personnel more aware of the Navy structure and mission as a subculture of the American society. It must be understood that the Navy cannot fully control the life-style and values of its personnel. They are influenced by the climate of feelings and opinions of the civilian world. However, the degree to which this is true is partially under Navy control and subject to policy. How these policies are presented and the extent to which the necessity and purpose of such policies are understood by the recruit are critical to his acceptance of the Navy.

HUMAN RELATIONS TRAINING. The Navy man of the future will be expected to assume responsibilities and to demonstrate capabilities closely paralleling those of employees of large business corporations. Admittedly, differences exist and must be recognized. Examples are the concept of 24-hour availability of the serviceman and the probability that during his enlistment he may experience periods of isolation from his family. To the extent that the Navy mission requires a different life-style, it is necessary for training to reflect these differences. In contrast to the present emphasis of human goals training, future training should be more in line with human relations training. It should assist the new enlistee in handling his personal affairs and in relating to others in such a way as to maximize the satisfaction of both personal and organizational goals.

Women will be playing a greater role in the Navy of the future and men need to be prepared for their arrival, just as women need to be prepared to handle their new careers. The two sexes must be taught how to relate to each other both on and off the job as Navy team members working

toward common goals. Civilians are utilized throughout the Navy to provide continuity where it is essential. Training in the proper interaction of Navy and civilian personnel working toward common goals should be a portion of Human Relations training.

Training to cope with foreign nationals should go beyond history, customs, and local laws. There are Navy positions, as well as personal beliefs and moral positions, to consider when dealing with peoples of foreign countries. For example, the problems and complications associated with marriage to foreign nationals from the legal, career, and security aspect, as well as acceptance by family and peers, are seldom understood by the young person prior to making such a commitment. The future Navy person must be given enough information to evaluate the pros and cons of such involvement.

DISCIPLINE TRAINING. Discipline is operationally defined, for the purposes of this discussion, as the willingness of an individual to accept lawful orders and follow instructions or rules in a supervised or unsupervised situation. In practice, there are two general types of discipline. Self-discipline is described as that which by individual perception and internalization of a set of conditions invokes a desired response to most situations. It includes qualities of self-reliance, independence, confidence, cooperation, and social tolerance. Minimal supervision is required. Imposed discipline is external to the individual and without response until direct orders are given. Imposed discipline requires constant supervision and corresponds to the layman's understanding of traditional military discipline. Imposed discipline should not be confused with group discipline which is defined as a group of self-disciplined individuals or team working together toward a common goal.

The concept of military discipline is of Navy-wide concern. The present practice of instilling the concept of discipline within the recruit environment is to enforce a stereotyped pattern of automated behavior. This is consonant with past theories of what the typical military man should be. The recruit of the future, as a result of lower manning levels aboard ship and early career assignments to more responsible positions of technical competence, will require the capability to act in a more self-disciplined manner than his predecessors.

Those who conduct basic training have experienced that individual self-discipline is a prerequisite to group discipline and requires a lower level of imposed discipline. The overall effect of practicing this concept has been rewarding to trainer and trainee alike. Conscious effort should be expended in future training to develop the self-discipline trait under the Navy value system as the primary component of discipline training. It is worthy to note that while many Navy people advocate a return to more autocratic forms of discipline, it would probably result in increased attrition and could erode the AVF concept.

REMEDIAL TRAINING. The recruit of the next decade will be deficient in reading and computational skills. Remedial training, particularly as related to reading skills, is expected to be a requirement for recruit training well into the next decade.⁵ While the public educational community is aware of and concerned with the present deficiencies in communication, reading, and mathematical skills, there is still considerable pressure to teach diversified curricula directed toward existing problems in society. In recent years there has been a shift from emphasizing the traditional three R's to teaching more socially-oriented subjects. The requirement for training of foreign nationals and young citizens with foreign language backgrounds (U.S. News and World Report, 1976) will further complicate the problem.

The reading difficulty level of required training manuals for recruits generally exceeds recruit capabilities. The Bluejackets Manual, for example, is written beyond the 10th grade level (Jones, 1975). This indicates a need either for training materials written at a more simplistic level to accomplish the objectives of recruit training or raising the reading comprehension level of recruits. The data call out a significant communications problem between trainee capability and instructional materials which must be addressed in the design of an effective training program for the future.

MANAGEMENT OF RECRUIT TRAINING

Each year the requirement to accomplish more training with fewer resources becomes more pronounced. This necessitates more effective management and a need to identify those factors which have a direct bearing on the efficiency of operation and job satisfaction of the individual. Management, in addition to accomplishing the stated mission of the organization, must instill an organizational climate which will provide the incentive for individuals to perform maximally. Specific concerns of management are discussed below in light of their proposed locus of control within the management system and how they might be better structured to meet the needs of the future Navy.

⁵ Objective evidence of the extent of the reading problem exists as a result of a study of basic reading skills of 7000 recruits. Duffy, Nugent, Miller and Carter (1974) found that 50 percent of those tested read below the 10.6 grade level, 18.6 percent below the 8.0 grade level, 4.7 percent below the 5.5 grade level. Youths were also found to be deficient in the basic computational skills. Nearly one-half of the recruits tested performed below the 8.0 grade level on number problems. Basic computation is a skill required in all Navy occupations since numbers are involved in measuring and using all varieties of gauges.

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Recruit training should remain a system under the functional management of the CNTECHTRA. For discussion purposes, two distinct management levels within the domain of recruit training are defined. The first is external management which encompasses all controls exercised outside of the RTCs and overlays the three independent commands. The second is internal management within each of the RTCs which allocates resources to implement and conduct the training program.

EXTERNAL MANAGEMENT. All external management functions should be exercised by CNTECHTRA. It is the management responsibility of CNTECHTRA to ensure a uniform recruit training product which meets the minimum requirements stipulated by operational commanders. External management should have the additional function of ensuring that required resources are available and that the curriculum and scheduling are consistent across commands. This would leave the staff at each RTC free to devote more energy to its primary mission of training the recruit.

INTERNAL MANAGEMENT. Each area of external management should have a parallel within the individual RTCs. However, the management responsibility would be more restricted and exist primarily to support external management policy. The primary function of internal RTC management should be to ensure that CNTECHTRA guidance is promulgated. Only such deviations from established schedule and curriculum should be permitted as are necessitated by differences in facilities and climate or unforeseen emergency situations. The emphasis within each of the three RTCs must be to conduct training and manage resources.

TRAINING PHILOSOPHY. It is the responsibility of external management to define the training philosophy and the responsibility of internal management to assure that the philosophy is disseminated and practiced. Possibly the most noticeable difference between the training of males and females is the current training climate. The atmosphere is one of respect and consideration for women trainees conveying a role of leadership by the trainers. This is evident even when males are in the role of trainer. In contrast, the training climate for males provides less personal attention reflecting an approach of "pushing" rather than "leading." The training climate for all recruits should convey the message that the individual is a valuable resource -- the Navy needs you and here is what you need to know to do your Navy job well. Section IV discusses training philosophy in greater detail.

ORGANIZATIONAL STRUCTURE OF RTCs. The use of an organizational structure during recruit training comparable to that of the Fleet would provide better orientation to ship organization and contribute to Navy tradition. The following substitutions by unit size are proposed to achieve this end.

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Present Organization

Squad
Platoon
Company
Battalion
Regiment

Proposed Organization

Section
Division
Department
Ship
Squadron

The potential of naming a training battalion after a famous ship; i.e., USS BON HOMME RICHARD, opens new avenues for relevance of training and for a smoother transition into the Navy. For example, upon assignment to his department a recruit would become part of ship's company of the USS BON HOMME RICHARD. As a result of association, he could soon learn the history and traditions of his ship as well as the Navy organizational structure. Adapt the WQ&S Bill to training and his orientation would be more complete.

STANDARDIZATION OF TRAINING. The task of providing equally prepared graduates from widely separated training facilities requires that a standardized curriculum and training program be implemented at each RTC. External management should dictate curriculum. The term "curriculum" encompasses all training--academic, military, physical, technical, and nontechnical. While issues of centralized management and standardization of training have been debated in some quarters, the mobility of military personnel and the limited formal training experience of many instructors make these concepts attractive.

Standardization as applied to recruit training contains several propositions. These are:

- . All recruit training graduates should meet a single set of specified objectives.
- . A single curriculum and best method of instruction can be identified.
- . Each RTC can administer a standard curriculum.
- . Frequent inspections can be conducted to insure that standardized instruction is occurring.

It is reasonable to expect that a single standardized approach to future recruit training can be implemented. Opponents of standardization, however, cite the dangers of stifling innovation. Actually, standardization, allied with a mechanism for change, would provide a means for cross-feeding ideas and early identification of problem areas. Concentrated effort could then be directed to solving the problems as identified.

The payoffs of standardization for recruit training are many. Included are (1) uniformity of product, (2) a training system that allows student, instructor, and management personnel to know where they stand within the overall system at any point in time, (3) a single curriculum that can be measured for adequacy against operational requirements and which identifies areas of strength or weakness, (4) a single curriculum that can be modified with minimal effort, and (5) a single curriculum that will allow better forecasting of logistic support requirements. These payoffs add up to system efficiency that should equate to an equal or higher quality product with probable savings in time and dollars over the long term.

CURRICULUM CONTENT. The current curriculum (September 1973, as revised) contains considerable subject matter which appears valid for use in the development of the future curriculum. That all portions of the current curriculum have value is unquestioned; however, some aspects of training have more face validity than others. The future curriculum would not be based solely upon tradition or past utility. The criterion for inclusion in the curriculum should be the present and future utility of the topic under consideration. Technical schools and operational units must cooperate in defining product requirements in terms of measurable objectives before the RTCs can provide appropriate training. A systems approach to developing the future curriculum will allow instructional modules and instructional emphases to be changed with minimal disruption of ongoing training.

There appears to be no valid reason for different training curricula for men and women. Physical differences, such as strength and stamina, can be easily accounted for, and the future curriculum should be adaptable to both sexes.

FACILITIES AND LOGISTICS. The requirement to train recruits to identical criteria within a defined time span makes facilities an important consideration. Ideally, each command requires comparable facilities. Management from a common external source would permit resources to be directed to meet the needs of a specific command without individual budget justification from the commanding officer of each installation.

No individual command, under the existing organization, has overall responsibility for logistical support functions at the RTCs. Base commanders have certain responsibilities; supply departments, others; and nonappropriated fund activities, still others. To add to the confusion, there is no coordinated system which ensures that the needs of each RTC are met with the proper items or quantities as required. As a result, much effort is expended at individual RTCs to ensure that logistics mesh with training schedules. For the future, a central manager for all RTCs who can establish a prioritized, standard list of supply items to be maintained and who can bulk order for the individual commands would reduce the problems faced by individual RTC commanding officers and permit them to devote more time and energy to the training function.

INPROCESSING. The processing period between one's enlistment and assignment to a recruit battalion is critical. This period provides for detailed administrative screening to eliminate unqualified persons erroneously enlisted. It also provides for the initial needs of those recruits who will remain in the system and, as such, should depict the new environment in a favorable light.

Inprocessing management should be exercised by CNTECHTRA since external management is in the best position to assure proper coordination between the various external commands required to cooperate in the accomplishment of this preliminary task; e.g., BUPERS, Recruiting, Medical, and Supply.

SCHEDULING. The scheduling of instructional time is important in terms of priorities and sequencing of learning topics. Presently, priorities and sequencing vary across RTCs. Centralized scheduling would assist in providing a recruit graduate who conforms to a single specified standard. Management of the scheduling function should be external rather than internal with only minor deviations permitted to accommodate for climate or emergency situations.

MILITARY QUALIFICATIONS. Military qualifications cover the broad categories of rights, duties, and responsibilities. The recruit should be led through a carefully planned and sequenced series of learning experiences culminating in a thorough understanding of the requirements for performance and for promotion to the next level.

TRAINING STRATEGIES. All indications are that the labor pool available to the Navy in the decade ahead will be comprised of a broader mental and physical mix than at present. This implies a need for training methods which can be adapted to individual differences. It should be the prerogative of external management to investigate and to implement new training strategies. The present training system primarily utilizes a lecture-centered, information-oriented, lockstep approach to training. It provides a limited range of options for adapting to individual abilities. Present screening methods select individuals with the intellectual capability needed to meet the academic standards of the military, but the constancy of attrition data on individuals classified across all ability levels attests to the fact that mental qualifications are not the only factors which determine success. A wide range of background capabilities, talents, and accomplishments are ignored because of the reliance on techniques designed for an average trainee in a particular lockstep setting. At the training level, present procedures screen out those people who do not conform to some vague or inconsistent norms which depend primarily upon the judgment of the person doing the actual training. Individual RTCs are aware of the problems and conduct experimental studies in order to improve training. There seems to be no reason why the training environment cannot be designed to more readily accommodate the variations

in the backgrounds, interests, and learning styles of individuals. The addition of interest and experience measures as well as measures of social and ethnic variables to screening procedures would provide finer discrimination. This refined screening, when combined with adaptive training, would provide an opportunity for each individual to most efficiently complete recruit training. Adaptive training provides a wide range of opportunities to the trainee for attaining competence. Alternate instructional methods are available which are matched to the knowledge about individuals (i.e., their backgrounds, talents, interests, and levels of competence), and each individual proceeds at his own pace. For example, the same subject matter could be administered in several different ways (text, film, microfiche, demonstration) depending upon the aptitude of the individual. The length of the training period would likewise be based upon the ability or learning style of the individual.

The most commonly voiced reason for the existing lockstep basic training is the stated requirement to maintain the tradition of military-style graduation ceremonies. These are considered rewarding and motivating to the enlistee who has succeeded. The training design of the future could be such that it would permit the traditional graduation ceremonies although the graduate might not remain with the same company throughout training. The adequately trained recruit, whose training is based on a standardized system, should be able to perform within any organized group dedicated to a single purpose.

Another reason for the popularity of the lockstep method is the common belief that it is the least expensive way to train large groups. The different rates of learning could make the adaptive training method more economical and place personnel in the operational environment sooner. There would, of course, be differences in the amount of time required to accomplish training for different individuals, but the overall time savings could offset the additional time required to train the slower learner or those in need of remedial or enrichment training.

Lockstep training can be unrewarding to the brighter individual and frustrating for the person with less than average ability or with some particular learning problem. The major difference between an adaptive system and the existing one is that in an adaptive system individual learning styles and capabilities would be diagnosed early and the training time or strategies would be adapted to each individual's particular talents. Each individual would undergo training at his own pace. An approximation of adaptive self-paced training could be achieved by group-paced training; i.e., training small groups of recruits having similar capabilities.

Although adaptive training may be considered impractical for near-term implementation for various reasons (for example, the responsiveness of the personnel assignment system), it should remain a long-term ideal for achievement within recruit training. Section IV of this report

proposes a curriculum design that introduces the concept of adaptive training to ensure readiness of the trainee to participate in the optimized core curriculum.

TRAINING AIDS. The more sophisticated recruit of the future will likely come from a school environment where modern teaching techniques and modularized media programs are commonplace. Since the Navy is phasing in these more modern training methods and devices in advanced technical training, some familiarity with these techniques is appropriate for the recruit training environment. The instructional program of the future should include the phasing in of some of the more sophisticated training aids as they become available, both for use in training groups of recruits in the classroom and individuals in the barracks area.

COMPANY COMMANDER SELECTION. The characteristics evidenced by CCs and the ratio of CCs to recruits are critical factors influencing the quality of training. The present manning ratio is considered inadequate for future needs. Today's recruits are a more homogeneous group than prospective future enlistees. As the recruit ability mix broadens, so will the requirement for instructor/student interaction.

It is important that only those petty officers with the highest qualifications be selected to train recruits. Recruit management should define the minimum acceptable standards. Figure 3 illustrates the recommended selection process for CCs. From the existing manpower pool, the Chief of Naval Personnel (CHNAVPERS) would select personnel who meet the criteria established by CNTECHTRA. The records of those whose availability dates correspond to the necessary reporting dates would be forwarded to CNTECHTRA for screening. Based solely on this record review, CNTECHTRA would notify the CHNAVPERS of those acceptable as potential CCs. Orders would be issued by the CHNAVPERS to those accepted, assigning them to CNTECHTRA for training. At the training level, final determination would be made in terms of a pass/fail grading scheme as to the person's acceptability for the position of CC. Failing students would either be returned to the manpower pool or assigned to an activity or command colocated with the RTC. Only in this way can management ensure a coordinated, integrated team. An added bonus would be that persons who have undergone a detailed screening and successfully completed training will have pride of accomplishment and can be expected to perform well. The selection process, when augmented by suitable incentives, would assist in acquiring highly qualified CCs.

COMPANY COMMANDER TRAINING. CC school curriculum and scheduling standardization should lead recruit training standardization as a preparatory measure. Since all CCs would receive nearly identical instruction, implementation of recruit training curriculum standardization would be aided.

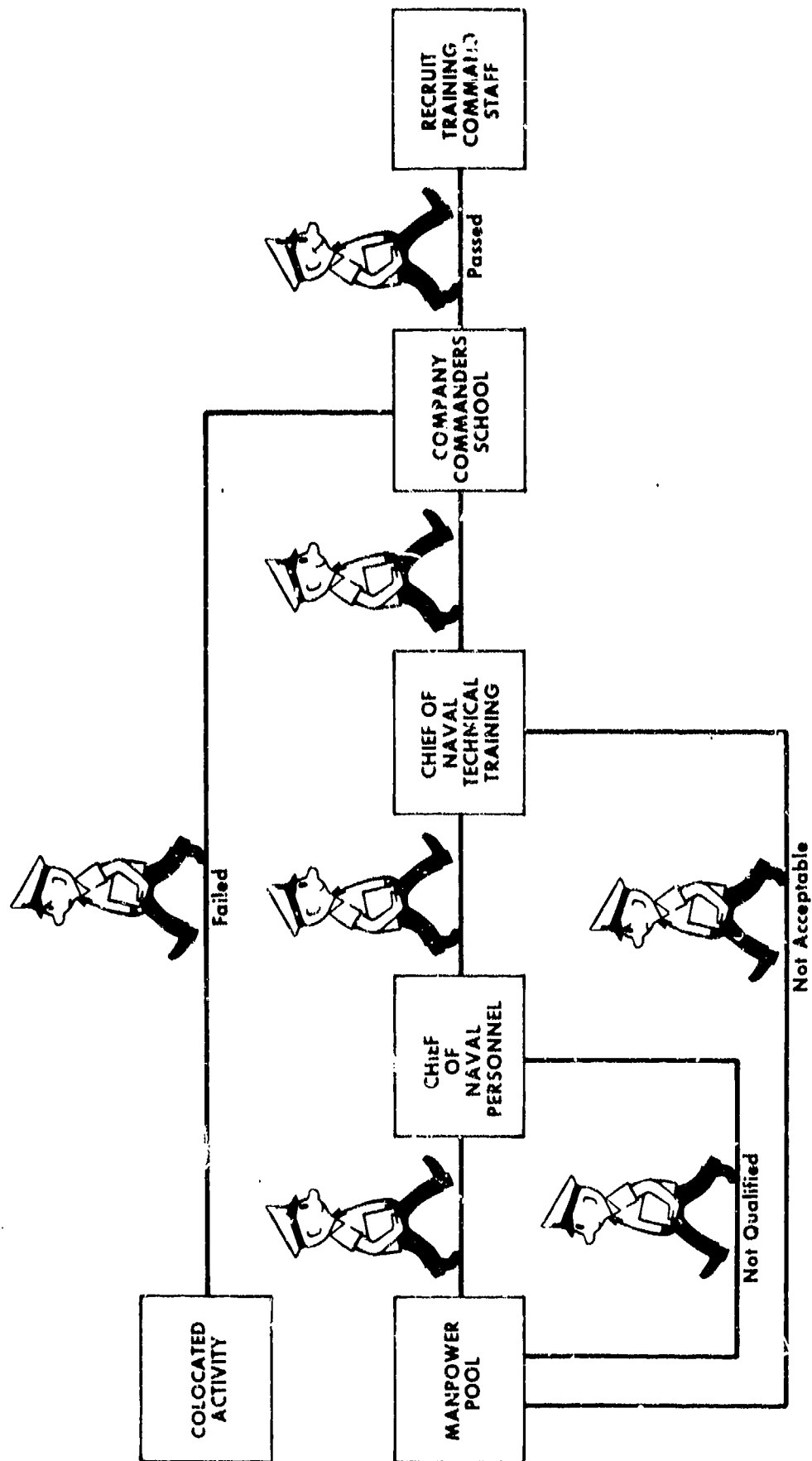


Figure 3. Company Commander Selection Process

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The curriculum should be developed, standardized, and its administration controlled by some centralized activity external to each RTC.

Instructor Training (IT) School is a prerequisite to CC duty. In addition to the training now being given, more emphasis on training in counseling methods is desirable. A combination IT/CC/counseling course would be well suited to the specific nature of training required to prepare persons for the role of CC. Further investigation would be required to determine the feasibility of implementation; however, it appears to have merit and could result in substantial savings of time and money.

TRAINING EVALUATION

INTERNAL. Training technology experience dictates that much of recruit training should be evaluated by performance demonstrations. This means that criterion-based testing procedures should be used to measure observable behavior. It further implies a series of defined instructional plateaus with cumulative evaluations leading to a qualified entry level sailor.

One current method of internal evaluation is that of placing companies in competition. Some form of a competitive system can be motivating, but care should be exercised to see that it is not made a competition among CCs rather than recruits and that each company has equal opportunity to compete successfully. As mentioned earlier, RTC San Diego has recently initiated a competitive evaluation program that is viewed as a model for the future.

EXTERNAL. External evaluation is as critical to the efficient conduct of training as internal achievement evaluation. A formalized feedback system to provide information from Fleet and technical training activities to the CNTECHTRA should be a component of the future recruit training system and should be managed externally to the RTCs.

QUALITY CONTROL. The inspection system is an important aspect of today's management process. Periodic, unscheduled inspections should be conducted by the CNTECHTRA staff managing the recruit training system. These inspections should relate primarily to the conduct of training and, in addition, identify training problems and initiate corrective action. The importance of active participation by the inspecting personnel cannot be over emphasized.

LENGTH OF RECRUIT TRAINING

The length of recruit training has varied during the recent past from 9 weeks to 7.6 weeks and back to 9 weeks when the 7.6 week program did not produce an acceptable Fleet product. The definition of an acceptable product is vague, eliciting a variety of responses that have been translated by the TAEG into capabilities a recruit graduate should possess (see Training Goals, section IV). The effect of variations in past definitions of the

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term "acceptable" has resulted in expansion, modification or elimination of certain portions of the training curriculum to fit imposed time constraints. Even though this method of curriculum modeling has been somewhat successful in the past, future requirements will place more rigid demands on the system and precise methods of establishing the length of recruit training will be necessary. A basis for determining the length of the training period is proposed in section IV.

SECTION IV

DESIGN FOR A BASIC OPTIMIZED ORIENTATION TRAINING SYSTEM

The status of current recruit training as discussed in section II, and the predicted events and requirements envisaged for the future as discussed in section III, dictate the need for a redesign of recruit training for the 1980's. This section of the report describes a design for a Basic Optimized Orientation Training System. The design model is based on an analysis of the present recruit training system, the operational requirements predicted for the 1980's, and the expected characteristics of the personnel input into the system for the 1980 decade.

LOGIC OF THE PROPOSED TRAINING MODEL

To become a qualified sailor most efficiently, the trainee must first understand WHAT he is to know and HOW he is to demonstrate what he has learned. This understanding can be greatly enhanced by a training program which clearly defines the behavior expected of the trainee upon course completion. However, before such a training program can be developed, training goals must be made explicit; and before this can be done, the desired attributes of the product of the particular training must be known. This is difficult for recruit training; first, because of the nature of the training (providing a smooth transition from civilian to military life-style) and, second, because of the variety of assignments which follow recruit training. What the entry level individual should be able to do; i.e., the functions, capabilities, and expected performance levels, should be established in cooperation with operational activities. Once the behavioral repertoire is established, it is incumbent upon the training activity to train individuals to the desired level. Since meeting training requirements is a continuous process and requirements are not static, it is incumbent upon the user of the product, as one part of the process, to take up subsequent training at the point where the other leaves off. Determining where one responsibility ends and the other begins is again more difficult in the case of recruit training than for other more technical training since orientation to a new environment does not end with graduation. It must be clear to each element in the training process where one leaves off and the other begins. If not, the expectations of the user may be greater than or inconsistent with what can reasonably be produced, resulting in dissatisfaction with the preceding training activity and its product.

The present system of recruit training and the desirable attributes of the future recruit graduate have been studied in great detail by the TAEG. The data obtained have led to the conclusion that the present recruit training system falls short of meeting operational needs when the present system is assessed in terms of future requirements. While some specific instances of shortcomings have been documented, there is a vague, general dissatisfaction expressed throughout the operational

forces by both the recruit graduate and his supervisors at all levels. The dissatisfaction stems, in part, from the belief that, while the present system adequately communicates a theoretical understanding of the behavior expected, it does not prepare individuals to perform certain important functions. A major redesign of recruit training will be essential to meet Fleet requirements. The remainder of this section provides a proposal for the development of an instructional package which could be expected to optimize recruit training for the decade ahead.

TRAINING PHILOSOPHY

A comprehensive rationale for the systematic redesign of recruit training should be set forth prior to changes in the current design. Stated here is a formal proposal of a training philosophy for acceptance by the Navy upon which the training model for the 1980's would be based.

Essential to the conduct of the proposed curriculum model is the tacit assumption of the importance of the trainee. All concerned with the training of the individual should accept him as one who has personal goals and who should be able to function independently to satisfy his personal aspirations within the Navy structure while accomplishing Navy goals. It is important that the training climate be such that people, their talents, skills, and motivations are considered the organization's most valuable resource. The trainee must be assisted in the development of self-discipline, allowed to make minor decisions, and provided enough time to reflect on the meaning of each day's experiences while simultaneously being provided with continuous encouragement and support. The advocated approach to training takes into consideration the following factors:

- . The dynamic nature of the American society and the requirement to adjust training methods to accommodate changes in societal attitudes, values, and needs.
- . The increasing sophistication of the manpower input which requires modern, up-to-date leadership and management practices.
- . The dignity of the individual which requires recognition of each person's rights, privileges, and pride in himself.
- . The need for individuals to attain certain personal goals as well as to meet those of the organization.
- . The accomplishment of a smooth transition from the civilian to the military environment by providing realistic and achievable training goals.
- . Equal opportunity for all which requires a curriculum and

training methods flexible enough to meet the needs of persons having a wide range of talents and capabilities.

- . An interrelated, phased training curriculum of increasing difficulty to provide the opportunity for achieving goals in a sequential progression.
- . The requirement for personal and academic counseling to assist individuals in integrating their civilian and Navy environments.
- . An evaluation system based upon positive incentives to encourage and motivate the individual toward successful accomplishment of the training goals.
- . An adaptability screening function which would be both timely and accurate in identifying persons incapable of adapting to the Navy and in returning them to civilian status.

TRAINING GOALS

The end goal of recruit training is to provide the operational forces with a sailor who can carry out his responsibilities according to the Navy's minimum expectations as to knowledges and skills for the beginner. A significant subgoal is the independent functioning of the trainee within the Navy structure. Navy training should provide individuals to the operational forces who can act independently and dependably to specific technically-oriented situations, as well as react as members of a team when the situation arises. Currently available data picture an adequately trained recruit as one who can exhibit the behaviors listed below. While the list is not all inclusive, it encompasses those major expected behaviors which can be observed and evaluated objectively and thus translated into training goals.

- . Exercises use of the Navy chain-of-command, observes regulations and persons in authority.
- . Exercises good self-discipline in relation to military and civilian authorities; accepts full responsibility for his actions.
- . Maintains himself and his living space in a clean, orderly manner.
- . Wears the uniform with pride and in accordance with regulations.
- . Respects the rights and privileges of others.
- . Uses correct Navy terminology.

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- . Can locate major shipboard spaces.
- . Exercises good safety habits in the living and working environments.
- . Meets and maintains physical fitness standards.
- . Uses common basic hand tools in the proper manner and for the proper purpose.
- . Manages his personal affairs (to include sexual and financial) in a mature manner. Refrains from the use of illegal drugs and narcotics.
- . Responds appropriately to emergency situations.

The development and shaping of these behaviors should be the major goal of recruit training. Since the basis for proficiency in most of these behaviors is assumed to have been acquired through previous training and experience in civilian life, there is considerable variability in the amount of training time required across individuals. Training to the stated desirable behaviors may even be an impossible task in the compressed time period usually allocated for recruit training, but the process would be considerably aided by the development of objectives which can be clearly communicated to the trainee and which can be evaluated without ambiguity. The present training system places emphasis on a military way and the attitudes associated therewith. These concepts are difficult to define and to translate into observable behavior. The result is a theoretical understanding of what one ought to be but provides little in the way of what one ought to do to be an acceptable sailor.

ASSUMPTIONS AND CONSTRAINTS

Management imposes certain constraints on the conduct of training which should be reflected in the redesign of the training program. Usually, these are related to existing facilities and budget, or a desire to maximally utilize personnel during the term of enlistment.

The TAEG has identified the following major constraints which are expected to impact on recruit training in the foreseeable future and which provide a basis for the proposed optimization plan.

- . The increased scrutiny from Congress and DoD to ensure cost-effective training will continue. This will require an evaluation plan which provides continuous monitoring and capabilities for updating of the training system.

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- . It is anticipated that the present austere budgeting will continue into the next decade; thus the instructional program must be compatible with major existing facilities rather than generate a need for extensive building or remodeling programs.
- . The Congress and DoD will expand the requirement for management information in the area of recruit training which necessitates a centralized accountability system.
- . The trend toward centralized management of training will continue; thus the future training program will require standardization of all components to include logistics, curriculum content, and implementation methods.
- . The recruit of tomorrow will be more sophisticated, more broadly educated but less competent in the basic reading and computational skills, less responsive to imposed discipline, and less able to adapt to the traditional military environment. Remedial and/or enrichment training and specialized socialization techniques as well as up-to-date management practices will be required to assimilate personnel into the Navy.
- . The recruit training curriculum content must be responsive to the ever changing technical and operational environments, necessitating an organized external feedback system.
- . The recruit training system must provide early identification of personnel who cannot meet Navy standards and either screen these persons out or provide remedial courses of action. The establishment of set performance standards to be applied in the early phases of training are required to reduce later, more costly attrition.
- . The length of time allotted by DoD for recruit training will vary with the changing political-socioeconomic environment; thus, a systematic means for varying the time devoted to training of recruits needs to be provided.
- . Proper evaluation of training dictates that the trainee demonstrate acquired skills throughout the training process; the development of criterion-based performance tests is essential.
- . The majority of Navy jobs can be performed by women based upon mental and physical attributes alone. Thus, one curriculum, applicable to both men and women, is required.

THE OPTIMIZATION STRATEGY

The purpose of the strategy described here is to optimize recruit training so as to graduate a sailor who will meet Fleet entry requirements while utilizing the fewest possible training resources; i.e., to maximize the amount of learning which takes place, while minimizing the amount of time and other resources required to produce that learning.

This would be accomplished by (1) systematically determining the critical subject matter to be included in the curriculum, (2) devising training strategies to maximize the acquisition of knowledges and skills, (3) determining the optimal or "best time" period required to teach the particular knowledges and skills, (4) ascertaining the ways in which the acquisition of training can be demonstrated, and (5) providing an evaluation plan which would reflect the degree to which these goals have been achieved.

OPTIMIZATION VIA PRIORITIZATION. The determination of suitable subject matter and the weight or importance to be assigned to the subject matter will be accomplished by a prioritization process. This will ensure that the most important content areas will get first attention in the training cycle; i.e., those knowledges and skills considered most critical to satisfactory performance in the operational environment will be given first consideration for inclusion in the curriculum. A discussion of the way in which content priorities will be determined and how they will be used to define the curriculum follows. Figure 4 illustrates how the curriculum will evolve as a result of the prioritization effort.

How Priorities Will Be Determined. Training objectives generated by CNTECHTRA will form the basis for determining curriculum content and prioritization decisions. The assignment of training priorities will be based upon human judgment; that is, the information supplied by people who are qualified to make a decision as to the relative importance of certain knowledges and skills in the operational setting. Crucial to the process is the source credibility; i.e., the expertise of the judges and how their judgments are elicited and quantified by the TAEG. The judges will arrange curriculum topics, to include behavioral statements of training objectives, in order of their importance. The TAEG will not make any value judgment as to what should or should not be taught, but will concentrate on determining whether each objective, as stated, is what the generating activity means (is a valid objective) and how the generating activity wants the acquisition of the learned objective demonstrated in trainee behavior.

Once the curriculum content has been prioritized, the judges will make a determination as to the optimal time period required to teach the content area. The optimal training times generated by this procedure would then be overlaid on varying time constraints as established by

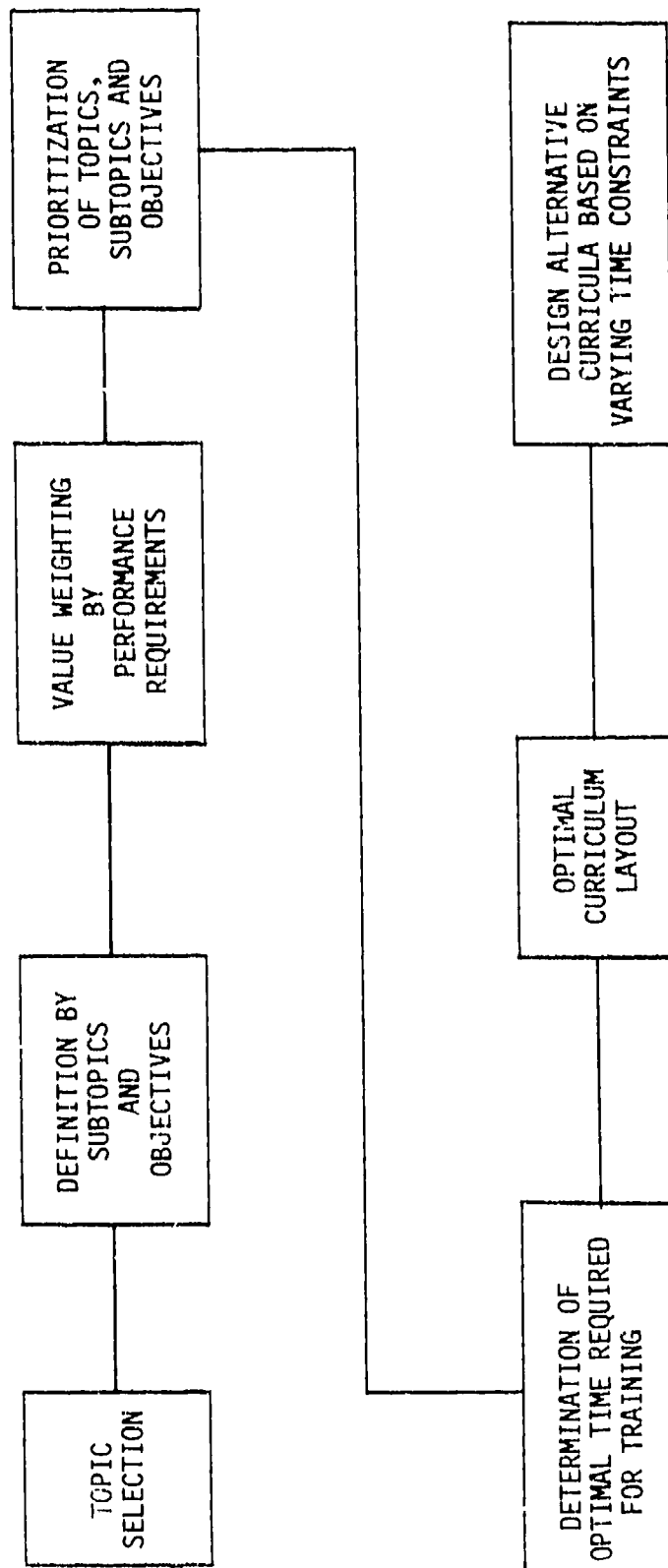


Figure 4. Curriculum Development Procedure

CNTECHTRA and evolving out of past experience and projected future requirements. Depending upon the time allocated for the training program, certain topics, subtopics and objectives would be selected for inclusion in the curriculum in order of their determined criticality for the satisfactory functioning of the recruit graduate.

How Priorities Are To Be Used. The prioritized topic lists will assist the curriculum developers in establishing a responsive curriculum and, where necessary, in making tradeoff analyses. Tradeoffs, when insufficient time is available, may involve decreasing emphasis placed on certain topic areas, or even their elimination from the curriculum. For instance, after a number of topics having high priority are selected to be taught, the remaining amount of time to be allocated to training may make it useless to attempt to teach a topic having a lower priority. In other words, topics would not be included in the curriculum simply to make it look good or merely to provide exposure. The underlying objectives to be met by the judges and TAEG in determining training content in a realistic manner are:

- . Teach only those topics which can be taught successfully with available time and resources.
- . Teach those topics having the highest priority first.
- . Teach a topic having a lower priority only when there is insufficient time to teach a higher priority topic successfully.

Example of Prioritization to Determine Training Content. The prioritization procedure can be explained as follows. Once the content to be included in the curriculum has been determined, the topic areas (to include subtopics and objectives) would be arranged in order from "high to low." Those topics considered most critical would be assigned top priority. Each topic would be assigned a training time interval by subject-matter experts, indicating a minimum and maximum time suited to teaching the subject. An optimal time⁶ to train that particular subject matter will be determined and assigned. Figure 5 shows how the decision to teach or not to teach a topic area is made at various points in the selection process. Topics having the highest priority are taught as long as time is available, lesser priority topics being taught only when there is insufficient time to teach one having higher priority. Since time is the constraining factor to be reckoned with, as time is increased, the number of topics taught will increase. The decision maker knows what is being traded off as a function of the amount of time available for training.

⁶ The best representation of the time values as set by all judges.

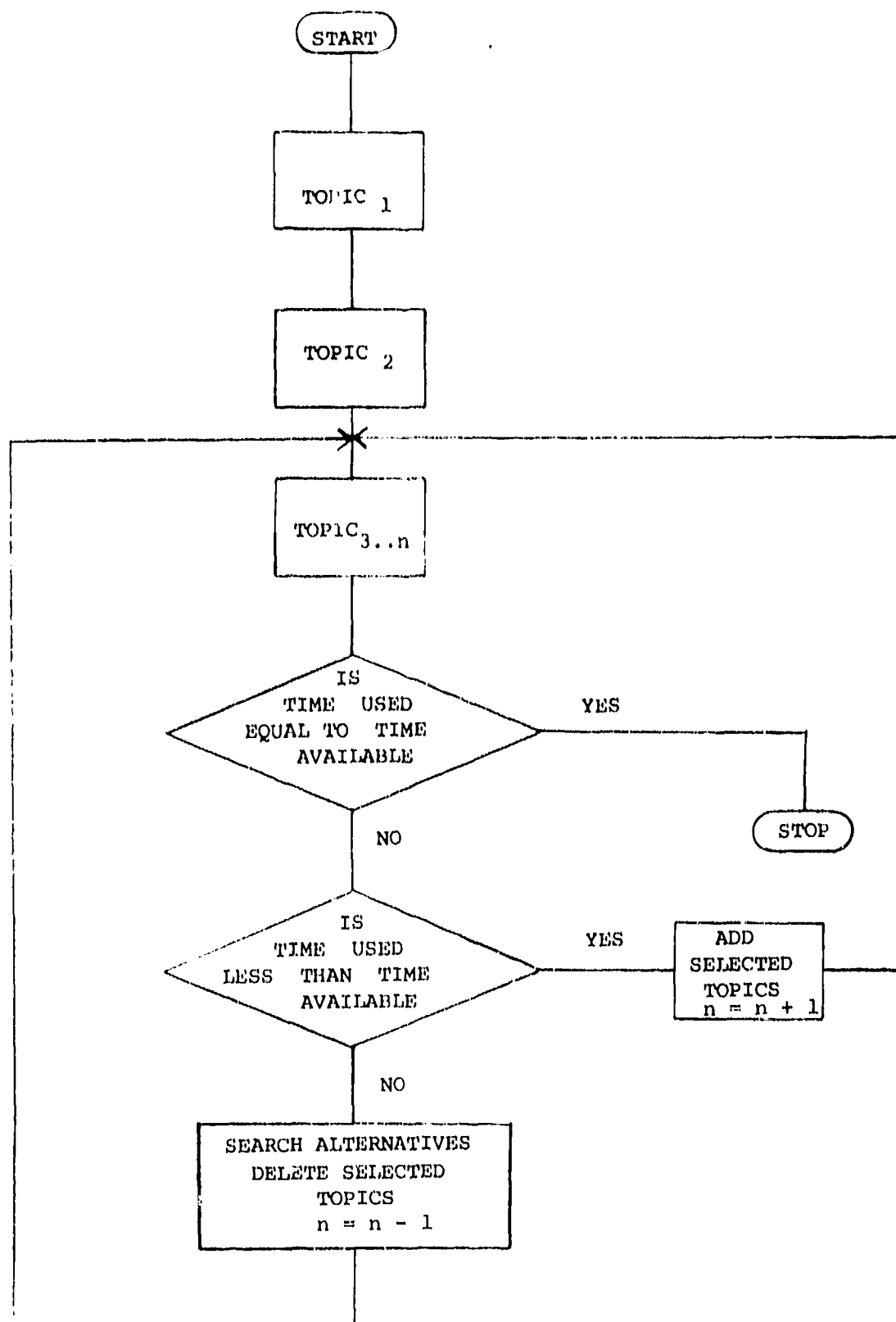


Figure 5. Selection Process and Decision Points for Prioritizing Topics and Determining Time Allocation

Table 1 illustrates the way in which curriculum topics, subtopics and objectives would be hierarchically arranged and training times computed.

TABLE 1. EXAMPLE OF RANK ORDERING OF PRIORITIZED TOPICS

TOPICS, SUBTOPICS & OBJECTIVES	PRIORITY RANK ORDER	MINIMUM TIME (HOURS)	MAXIMUM TIME (HOURS)	OPTIMAL TIME (HOURS)	CUMULATIVE TIME (WEEKS)
"SAILING"	1	8.0	10.0	9.0	.23
a. How to select a sail boat	1a	1.0	1.5	1.1	
b. How to put on sails	1b	1.0	1.5	1.3	
c. How to raise sails	1c	1.0	1.5	1.2	
d. How to set sails	1d	.5	1.0	.9	

The hypothetical course topic "Sailing" has been chosen for purpose of explanation. This topic (T) has been assigned a priority (P) of 1, in relation to other topics. Within the topic area are 10 major objectives (O1...10), each assigned an order of priority in relation to the others. Judges have decided that the 10 objectives require a minimum of 8 hours and a maximum of 10 hours to train. In other words, the optimal time lies somewhere between 8 and 10 hours. The best average time judgment would be assigned as the optimal amount of time which should be devoted to teaching that topic. The average time, 9.0 hours⁷, might be fixed as the time to train. Each curriculum topic would be treated in like manner. When all training times have been calculated, these would be added together. The obtained cumulative training time in hours would be converted to weeks of training time required to teach the total optimized curriculum. The number of topics to be taught would then be adjusted through tradeoff analysis to conform to the time allocated for conducting the training program.

⁷ The average of the minimum and maximum times assigned by all judges to train the topic has been used in this instance. Since, realistically, each time estimate has an interval around it, a more sensitive sophisticated procedure would be used to determine the optimal time. More confidence can be placed in a time interval containing the appropriate amount of time than on a single estimated time for each topic.

Time to be devoted to administrative or inprocessing tasks would be fixed at some constant (k). The total time required to conduct the program is the cumulative total of all topic areas, plus the time required for inprocessing. Thus, training time for all prioritized topics would require a hypothetical "X" weeks plus "Y" weeks of administrative and inprocessing time.

The formula becomes: $T = TP + K \geq \text{AVAILABLE TIME}$

Where:

Total Cumulative Training Time = Time to Train Prioritized Topics 1 through n + Administrative Fixed Time Periods \geq Time Constraints

Figure 6 depicts the manner in which the time to teach one topic area is added to the time to teach another topic area and the total

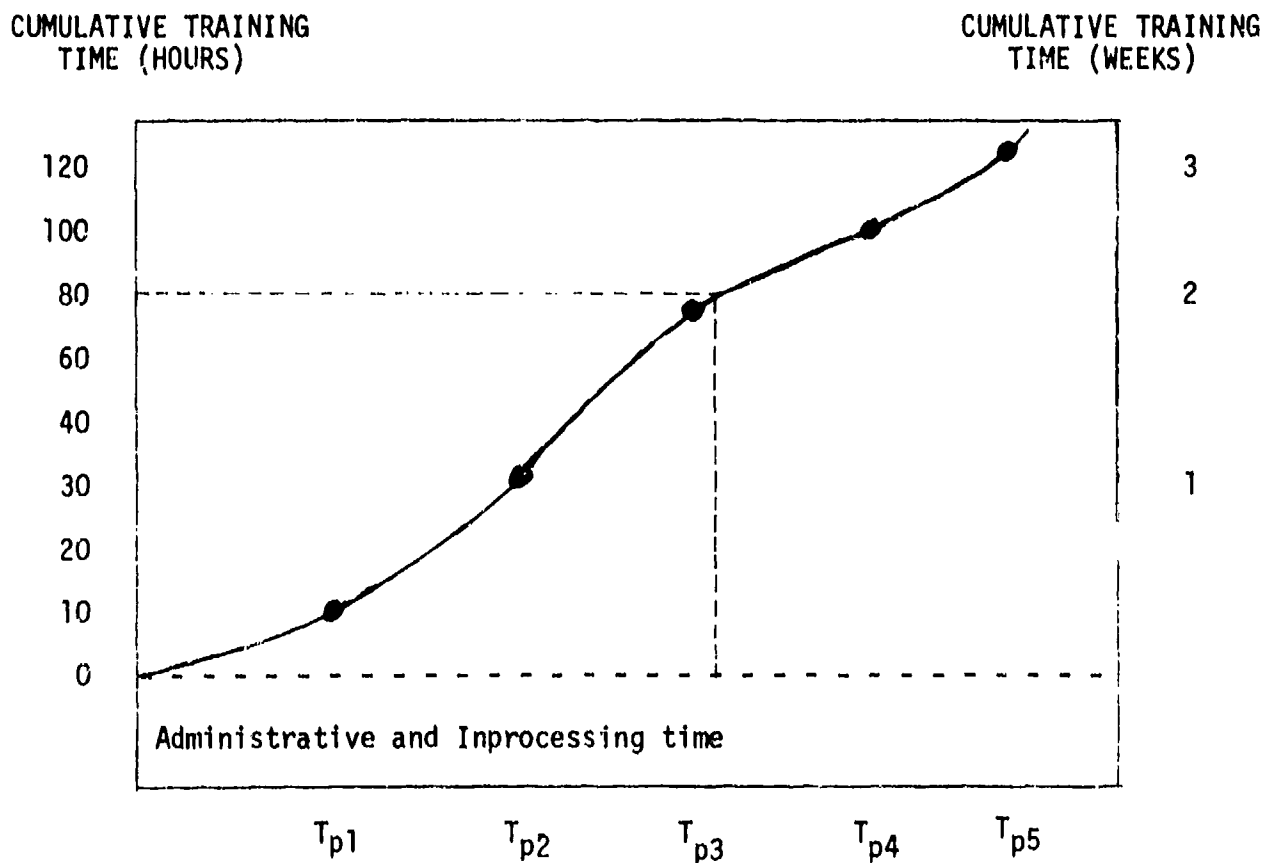


Figure 6. EXAMPLE: Prioritized Curriculum Topics Showing Hypothetical Training Times and Cut-Off of Topics When Time is Insufficient to Teach All Topics

added to inprocessing time to arrive at the total time required to conduct the program. In this example, if total training time were constrained to two weeks in addition to inprocessing, then topics 4 and 5 would not be taught at all. This is consistent with the logic that no topic would be taught unless it could be taught successfully. Formulating the curriculum in this manner allows the curriculum developer to make the optimal selection of training topics and to allocate the needed amount of time to be devoted to any particular topic area. It presents data in a usable form to assist in tradeoff analyses as a function of imposed time constraints.

OPTIMIZATION VIA FUNCTIONALIZATION. Experience has shown that when skills are to be utilized in a particular setting, trainees will learn better if the setting is duplicated in the training situation. This is defined as functional context training. It is proposed that recruit training procedures be made as functional or job relevant as possible. The WQ&S Bill, for example, could be utilized in the barracks area to provide realism. Other similar strategies could be used to make the training environment as similar to the operational environment as feasible. Bringing the training organizational structure in line with shipboard organization is another method that might be used. This has already been discussed in section III. More participation on the part of the trainee could be utilized as a training tool as opposed to the group lectures and observation of films generally found in today's approach to training.

The training program would follow a logical sequence, initiating the individual to the Navy and showing him the relationship of events to his own career. Using the concept of teaching skills and knowledges in a situational context, training would introduce the trainee to, and clarify for him, his PLACE within the Navy organization and prepare him to perform stipulated FUNCTIONS within the organization. The training would concentrate on the learning of proper responses to typical Navy situations, in contrast to training which emphasizes understanding of theory and developing attitudes.

Curriculum Content. Curriculum content would be closely tied to the objectives arising out of the prioritization procedure. The content would include only that subject matter needed by the individual to perform the functions of his initial duties; i.e., prepare him for the minimum acceptable beginning job performance. The selection of curriculum content would be made with close reference to the Navy's expectations for the knowledges and skills of the new seaman. Some examples of what the content would provide are:

- . The place and function of the Navy in the larger governmental structure.
- . The place of the trainee and his prospective job in the Navy.
- . Behaviors required of the Navy man to carry out his responsibility for representing the Navy in the larger social community.

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- . The specific knowledges and skills required by the trainee to perform the tasks for which he will be given beginning responsibility.

The curriculum content would point out the similarities to and differences from the trainee's former way of life and indicate how previous learning could be applied to the new environment to cope with various kinds of situations unique to Navy life. In contrast to the current teaching of many isolated individual topics, curriculum content would be structured within a cohesive framework and in sequence to aid skill acquisition. This would permit the trainee to integrate each unit of learning and to use each unit as a building block (each unit reinforcing the other). Thus, a continuous, identifiable thread would run throughout the training cycle.

Curriculum Emphasis. One of the stated goals of the present recruit training program is the development of attitudes to conform to the military. Due to the complexity and the enduring nature of attitudes, it is difficult to instill and measure attitude changes; hence, it is inappropriate to concentrate on this topic during the short time frame of recruit training. It is, however, recognized that a favorable attitude is important to the acquisition of knowledge and skills, and it is practical to start training with the assumption that the individual has a positive attitude and is motivated to succeed by virtue of the voluntary nature of his enlistment. It is also practical to assume that properly designed and conducted training programs will encourage positive attitude formation on the part of the trainee. Therefore, from this perspective the primary goal of recruit training should be one of transmitting knowledges and skills for dealing with job and life situations. The attending to attitude modification becomes an ancillary goal. Such a view of the training goal simplifies the curriculum and makes control considerably easier.

The proposed training program would place emphasis on what may be termed PRIMARY learnings (related to the acquisition of knowledges and skills). ANCILLARY learnings (related to the development of appropriate attitudes) would be incidental to the PRIMARY learnings portion of the curriculum. Coincidentally, with teaching the PRIMARY learnings the training environment would be structured to encourage the ANCILLARY learnings to occur thereby promoting maximum acceptance of Navy values. The training environment is discussed more fully in this section under "Training Philosophy." This PRIMARY/ANCILLARY training dichotomy as opposed to the Military/Technical, currently in use, would greatly assist in the difficult task of assigning behavioral objectives to the curriculum content, and in the construction of evaluative instruments capable of monitoring the instructional system.

OPTIMIZATION VIA INSTRUCTIONAL STRATEGIES. The chief aim of the proposed training would be to develop behavior patterns that would enable the trainee to function to the best of his potential ability in his new environment. The central training theme would be that of teaching the PRIMARY knowledges and skills, utilizing both group and individual training. New methods and techniques would be integrated with those proven to be successful in the past. The program design would recommend the particular instructional strategies and training aids considered most effective to produce the desired learning.

For ease of implementation and in the interest of immediate practicality, an alternative to the ideal self-paced, adaptive system (discussed in section III) is proposed for the decade ahead. Individual abilities would be assessed at the time of enlistment. Entering recruits requiring remedial or enrichment training would be placed in special companies. Once the special training was accomplished, the trainee would enter the main training flow. This method of adaptive preplanning would provide motivation to the new recruit and to the trainer and is preferable to the correcting of deficient performance by assignment to special corrective companies during the training period. The capability of recycling the trainee during the first two weeks of the regular training flow would be maintained. Any major difficulties which would prevent the trainee's graduation should be identified within that time period.

Figure 7 illustrates how recruits placed in the adaptive training mode would enter the training flow. The special company categories are purely hypothetical for purposes of this example. The special companies could be managed by the RTC externally to the recruit training function in the same manner as current apprentice training is managed, thus eliminating a considerable degree of confusion in the orientation and skill training cycle by individuals leaving and entering at various points throughout training.

OPTIMIZATION VIA TRAINING EVALUATION. Evaluation is necessary to the success of any ongoing training program. The effectiveness of training can best be assessed by some measure of the attainment of the objectives. An evaluation plan would be developed concomitantly with the training plan. This plan would reflect the content which the trainee was expected to learn in the particular unit of training administered and form the basis for phase testing and a final criterion-based performance test. The intent is that particular training objectives would be clearly defined and communicated to those who evaluate and those to be evaluated. Only then will the measuring instruments reflect the degree to which the desired learning has occurred. Equally important is feedback from operational units on the performance of the recruit graduate. External feedback is critical to the identification of deficiencies within the training system. Ongoing studies of cost-effective methods for obtaining

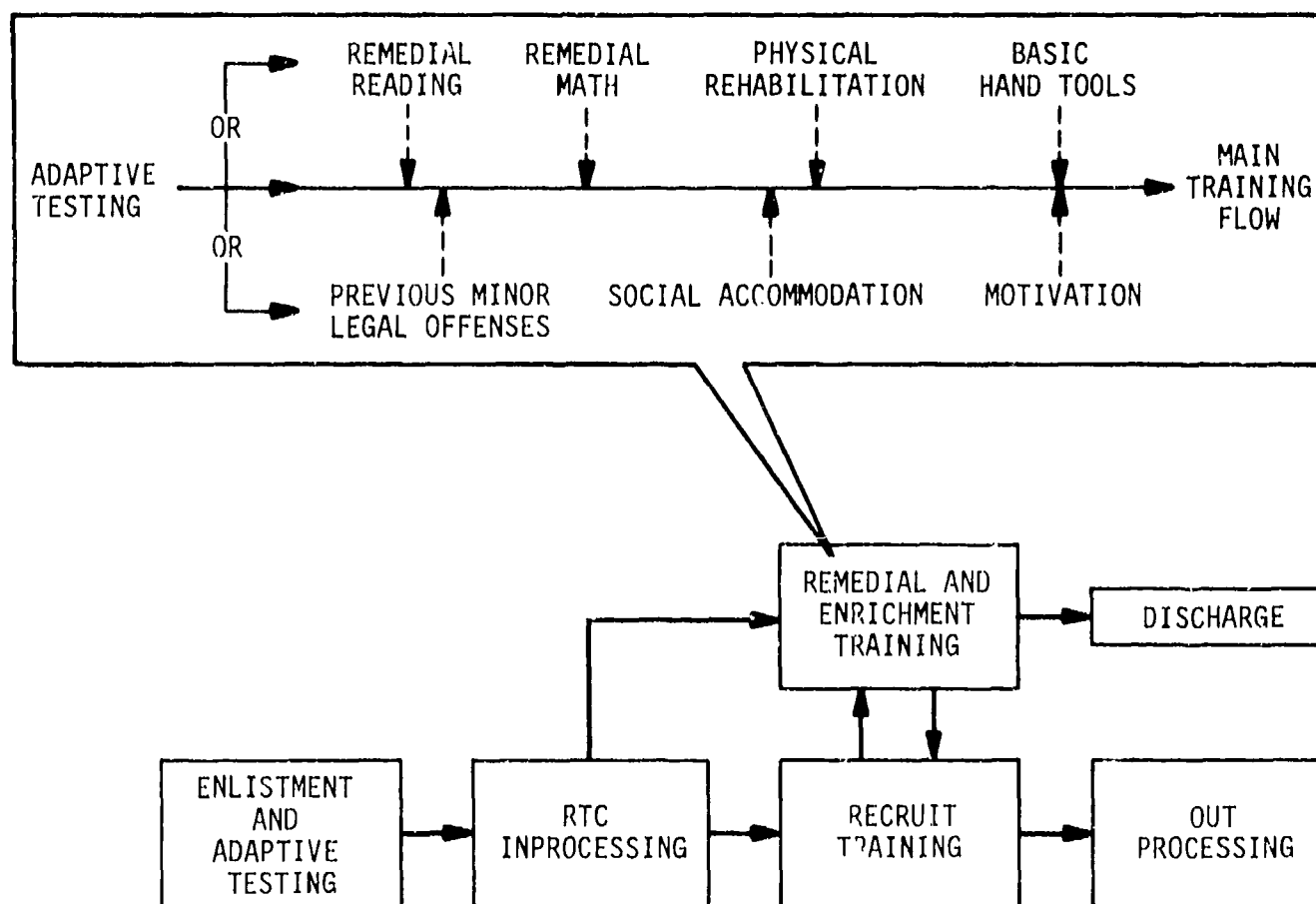


Figure 7. Sample Training Flow of the Future System

feedback will be considered for their practicality and value for recruit training evaluation and recommendations will be offered along with the curriculum developed.

PHASES OF PROPOSED TRAINING. Four training phases are envisioned in conducting the proposed program (see figure 8). Phase I, the inprocessing phase, would provide for the physical needs of the individual (for example, uniforms, haircuts, medical, dental) and administrative requirements such as testing, records initiation, and classification. The time for this phase would be fixed at some irreducible minimum for each RTC and would reflect the differences in facilities at each location. Phase II of training would introduce the individual to his PLACE within the Navy and explain the organizational structure of the DoD and the Navy and the relationship between these elements. The major emphasis of Phase III training would delineate for the trainee his FUNCTION within the Navy and would train the individual to respond to realistic environmental situations (watch standing, damage control, fire fighting, etc.). Phase IV would be devoted to the development of the individual and his interpersonal skills (physical fitness, personal hygiene, and human relations) as well as military orientation. Phase IV would be ongoing concurrently with other phases of training and would occur, for the most part, in the barracks area under the guidance of the CC.

LENGTH OF THE TRAINING PERIOD. External to the training program are the fluctuating national and international political and socioeconomic conditions which affect the quality and attitudes of personnel input to the training system as well as the amount of time available for training. These changing conditions often require that the length of the training period be modified to accommodate changing personnel patterns or national exigencies.

The present uncertainty as to the required length of training could be considerably resolved by developing a systematic method for determining the length of the training period. The actual length of recruit training should be based upon:

- . A prioritized list of approved curriculum topics.
- . A defined level of proficiency for each topic.
- . The quality and characteristics of recruit input.
- . An analysis of time required to obtain the desired level of proficiency for each instructional topic based on 1, 2, and 3 above.
- . The observation time needed to perform an adequate screening for adaptability.

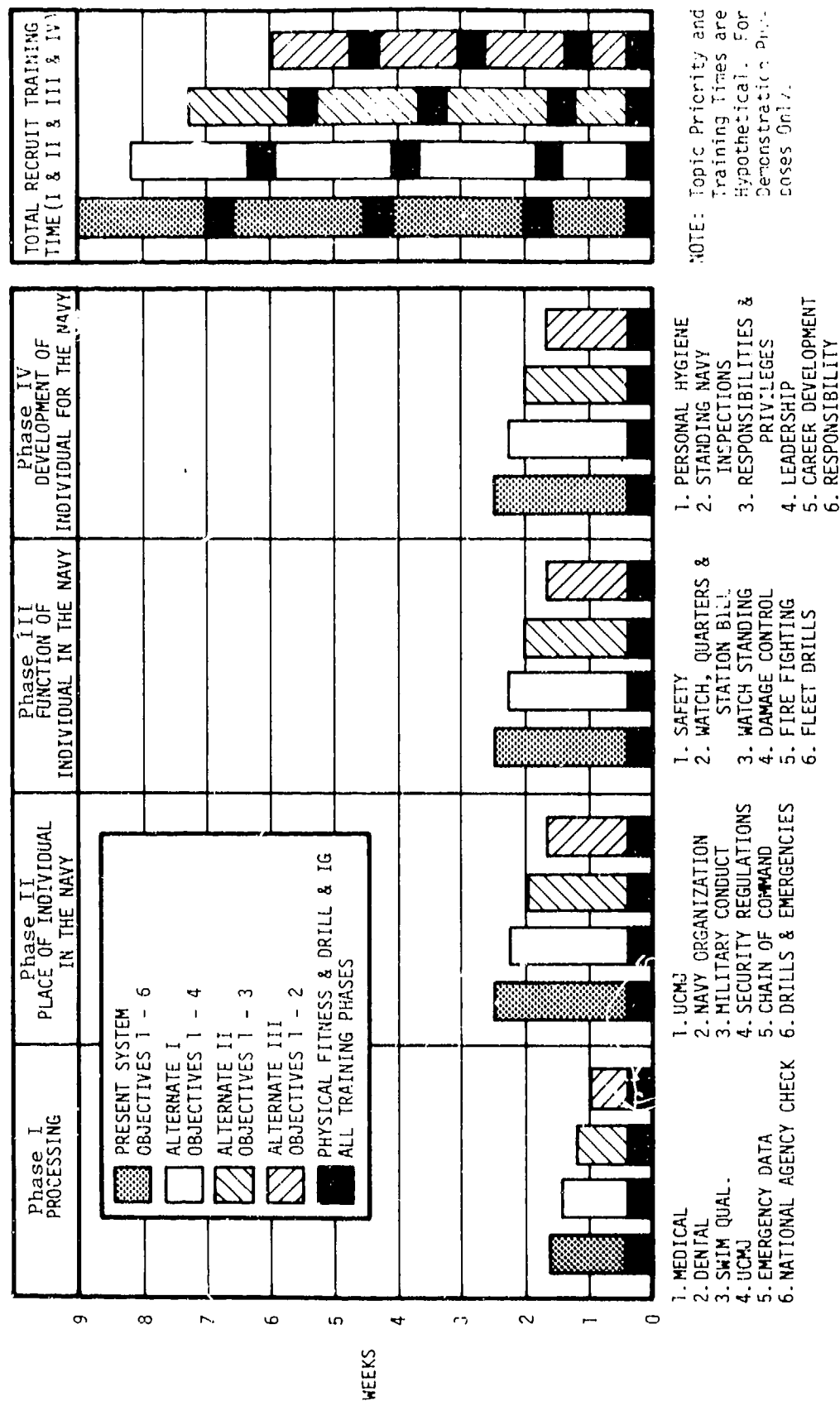


Figure 8. Variable Duration Training Model

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- . The physical layout of facilities and climatic conditions at each RTC.

Figure 8 illustrates a variable time duration model and shows how several curricula requiring differing training times and resources would be developed.

POST NOTE

This report has presented the results of Phase I of the Recruit Training Optimization project. A proposal for future recruit training based upon an analysis of the present training system and projected future requirements is provided.

Phase II of this project, in addition to determining curriculum content priorities and optimal training times, will develop alternate curricula for accomplishing recruit training under several possible emergent conditions based upon time constraints. Curriculum topics will be prioritized both within and across subject matter areas to provide the capability to adjust the training schedule in a logical manner. The procedure will enable decision makers to provide the minimum training requirements at any particular time, calculate the necessary tradeoffs, and enable them to predict the training outcome with reasonable success. The optimal curriculum constructed by the TAEG and subject-matter experts will be used to develop several alternative curricula. Each curriculum alternative will require differing resources in terms of personnel, time, dollars, and training materiel. Using available data and estimation procedures, an economic analysis of proposed alternatives will be conducted which, when combined in a matrix format with the proposed curricula, will permit the determination of the recommended single curriculum for any given time constraint.

Phase III of this project will finalize the approved curriculum(a) to include recommended supportive materiel. Specifications for evaluation instruments will be developed and a final report on the project will be submitted.

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APPENDIX A

VISITS AND CONTACTS

This study involved a number of visits and contacts with personnel in the Department of Defense associated with indoctrination training of enlisted personnel. In addition, interviews were held with officials of both federal and non-federal activities concerned with education, training and long-term planning. Due to the location of the TAEG, a number of visits were made to the TAEG Team by representatives of activities interested in certain aspects of this study.

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Washington, DC

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Washington, DC

Center for Naval Analyses
Washington, DC

Naval Education and Training Command
Pensacola, FL

Naval Technical Training Command
Millington, TN

Naval Technical Training Center, Corry Station
Pensacola, FL

Commanding Officer, Naval Training Center
San Diego, CA

Naval Training Center
Orlando, FL

Recruit Training Command
Orlando, FL

Recruit Training Command
Great Lakes, IL

Recruit Training Command
San Diego, CA

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Naval Education and Training Support Command
Pensacola, FL

Naval Training Equipment Center
Orlando, FL

Stress Medicine Division
Naval Health Research Center
San Diego, CA

Fleet Training Center
Mayport, FL

Naval Mine Warfare School
Charleston, SC

Submarine Group 6
Navy Base, Charleston, SC

Commander, Naval Surface Command
Atlantic Fleet
Norfolk, VA

Fleet Combat Direction System Training Center
Dam Neck, VA

USS LEWIS AND CLARK (SSBN644)
USS TATTNALL (DDO 19)
USS KOELSCH (FF 1049)
USS BLANDY (DD 943)
USS NEOSHO (AO 143)
USS OPPORTUNE (ARS 41)
USS IWO JIMA (LPH 2)

Naval Instructional Technology Development Center
San Diego, CA

Navy Personnel Research and Development Center
San Diego, CA

Naval Education and Training Program Development Center
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Naval Education and Training Support Center, Pacific
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Army Infantry School and Center
Fort Benning, GA

Commander, Basic Combat Training
Fort Jackson, SC

Commander, Advanced Individual Training
Fort Jackson, SC

Army Training Device Agency
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Dr. C. B. Gambrell, Advisor Group, Army Research Institute
for Behavioral and Social Sciences and Consultant Member,
Army Scientific Advisory Panel

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Randolph Air Force Base, TX

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Lackland Air Force Base, TX

Air Force Liaison, NTEC
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D. Other Federal Agencies

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Washington, DC

Department of Labor
Washington, DC

Office of Education
Department of Health, Education and Welfare
Washington, DC

National Center for Educational Statistics
Washington, DC

Dr. Edward Teller, Associate Director of the Lawrence Livermore
Laboratory and Professor of the University of California,
Berkeley, CA

E. Non-Federal Organizations

Department of National Defense, Canadian Forces
Ottawa, Ontario, Canada K1A 0K2

Human Resources Research Organization
Alexandria, VA

Center for Education Technology
The Florida State University
Tallahassee, FL

Institute of Higher Education
University of Florida
Gainesville, FL

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Audio Visual Center
San Francisco State University
San Francisco, CA

Florida Technological University
Orlando, FL

Xerox Learning Systems
Arlington, VA

Singer Education and Training Products
Rochester, NY

Department of Education
State of Georgia
Atlanta, GA

Department of Education
State of Florida
Tallahassee, FL

APPENDIX B

IMPACT OF COMMUNITY/JUNIOR COLLEGES AND AREA
VOCATIONAL-TECHNICAL SCHOOLS ON PERSONNEL
INPUT TO THE NAVY

The National Defense Education Act of 1958 and the Vocational Education Amendment of 1968 have done much to improve the status of vocational-technical (VOTEC) training throughout the United States.

The need for technically qualified individuals by industry and the trend for many young people to enter service occupations resulted in the expansion of VOTEC institutions to meet the demands of the local economy. There are now over 2000 modern public area VOTEC institutions in the United States, and, over the past several years, these institutions have been expanding at the rate of 125 per year (Simon and Grant, 1972). The nation's 1200 community and junior colleges are expanding at the rate of 10 to 20 percent per year in all states of the nation. These colleges enroll more than 4 million students in credit courses alone (Report of the American Association of Community and Junior Colleges, 1976).

State and Federal funds have made no or low cost education available to a wide clientele. The result has benefited millions of persons in hundreds of communities. Many states report that in spite of the economic recession of 1974 and 1975, the supply of VOTEC graduates is not meeting the demands of industry or service organizations.

While the major impact of VOTEC programs is still in its early stages, this method of pre-employment training could have a major future impact on the type of individual entering the Navy. The American Association of Community and Junior Colleges (AACJC) projects that increasingly the whole community is seen as the campus and every citizen a student. The AACJC reported in 1976 that in many communities 1 in 10 citizens are served by the community college each year and over 85 percent report 100 percent employed upon completion of their program.

This raises the question for the young man and woman of whether it is preferable to learn a skill in the Navy or to attend a local VOTEC institution with the assurance of a job upon graduation. The expanding competition for talent and the greater availability of technical training have serious implications for the quality of recruits available to the Navy.

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